



Megapixel Mini Dome Network Camera

MD-100A series

User's Manual

Quality Service Group

Product name: Network Camera (MD-100A series)

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Before You Use This Product

In many countries, there are laws prohibiting or restricting the use of surveillance devices. This Network Camera is a high-performance, web-ready camera which can be part of a flexible surveillance system. It is the user's responsibility to ensure that the operation of this camera is legal before installing this unit for its intended use.

Upon opening the product's package, verify that all the accessories listed on the "Package Contents" are included. Before installing the Network Camera, read the warnings in the "Quick Installation Guide" to avoid misuse. When installing the Network Camera, carefully read and follow the instructions in the "Installation" chapters to avoid damages due to faulty assembly or installation.

FCC Warning

This device complies with Part 15 of FCC rules.

Operation is subject to the following two conditions;

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operations.



Regulatory Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



IMPORTANT NOTE:

FCC Radiation Exposure Statement:

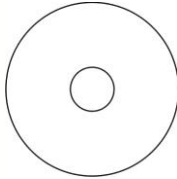


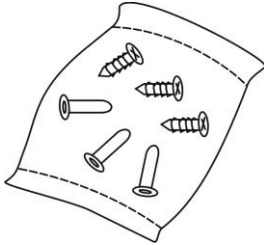
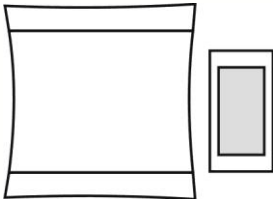
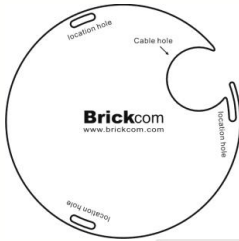
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

Package Contents

Please check to make sure that the product package contains all the accessories listed below.

<p>a. OMD-100A</p> 	<p>b. Product CD</p> 
<p>c. Water-Proof Connector</p> 	<p>d. Allen Key</p> 
<p>e. Warranty Card</p> 	<p>f. Screw Bags</p> 
<p>g. Dry Bag / Double-Sided Tape</p> 	<p>h. Alignment Sticker</p> 
<p>i. Easy Installation Guide</p> 	

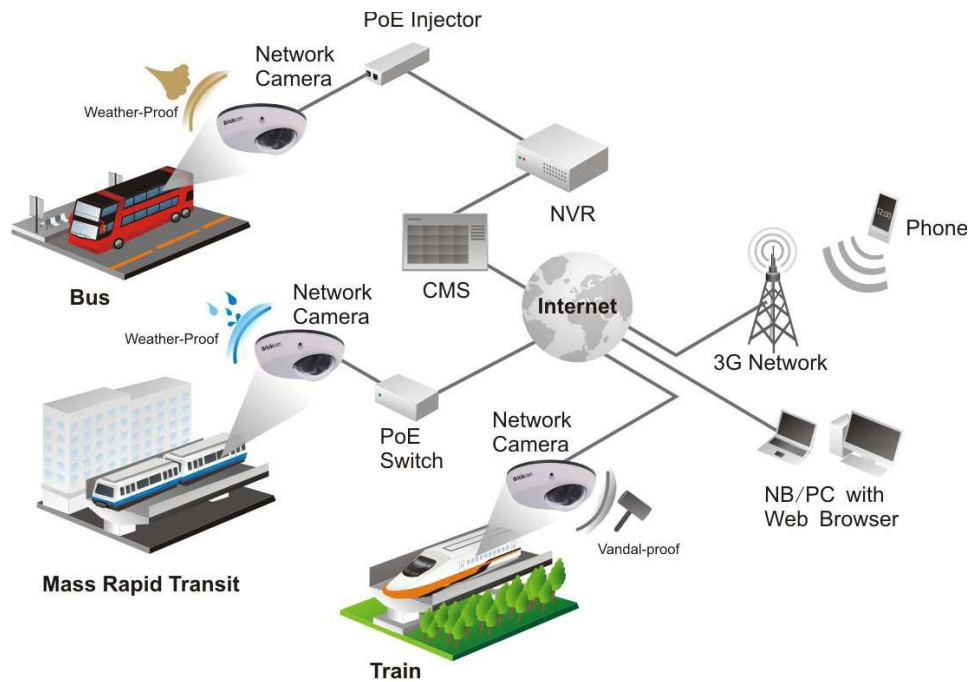
Mini Dome Network Camera Overview

The Brickcom MD-100A series is a mini dome network camera designed for outdoor use. The inconspicuous, sleek design of this series provides it with protection from high-level weather and vandal. Its ability to withstand vibration, shock, dust, rust, high temperatures and humidity make it an effective security camera for parking lots and public transportation.

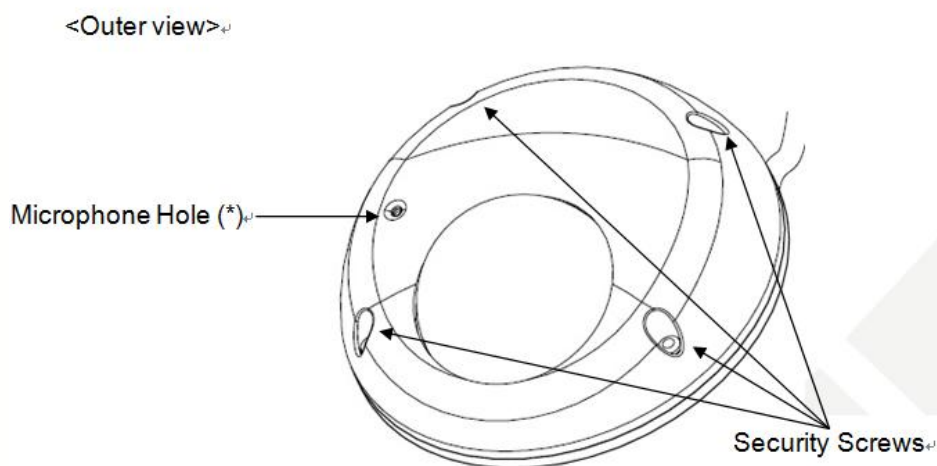
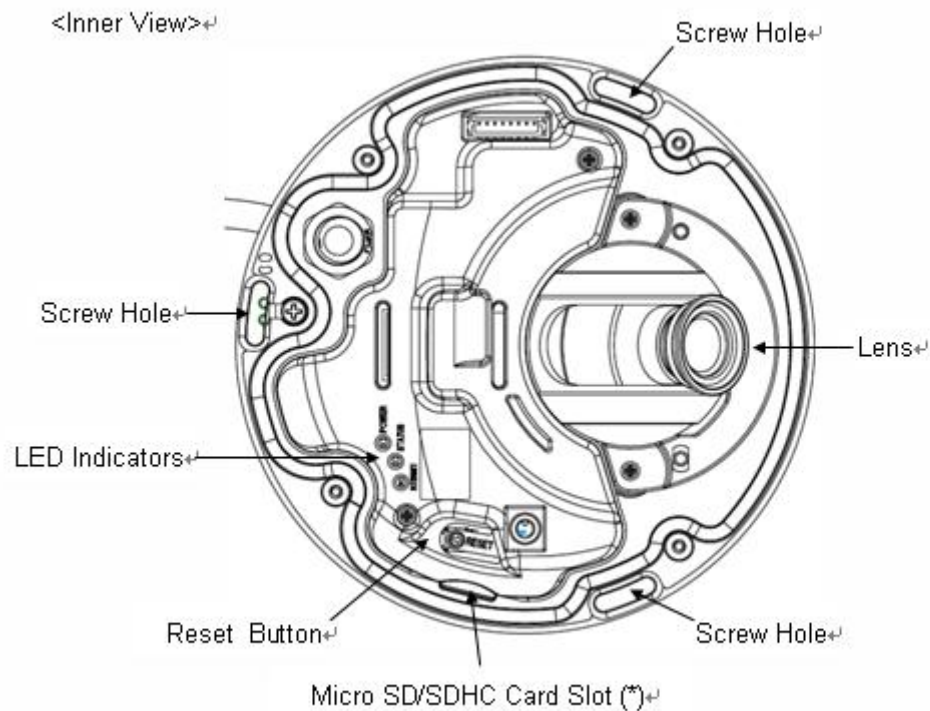
The MD-100A series is designed to provide end users with high quality video feed for an easily accessible security system. By offering H.264/M-JPEG/MPEG-4 triple codec compression, it is able to offer a flexible system which does not require high bandwidth and storage capabilities. The internal micro SD/SDHC memory card slot allows for local storage, which prevents data loss if the data connection is lost. The wide angle lens allows for the camera to capture a panoramic view which can be viewed at a high 1280 x 800 megapixel resolution.


To simplify installation, the MD-100A series is equipped with 802.af compliant Power over Ethernet (PoE), allowing the camera to receive power through the same cable as for data transmission. This camera series offers a unique design which allows easy use for users with any level of technical background.





Device Appearance Description



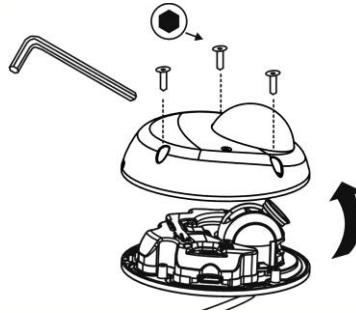
 (*) These are optional features. Please refer to the Product List for the full list of optional features that are available for this product.

Installation

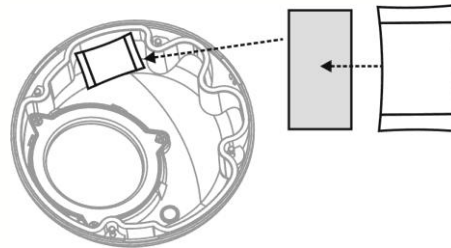
Hardware Installation

WARNING: Do not mount the camera on a soft material. The camera may fall and be damaged.

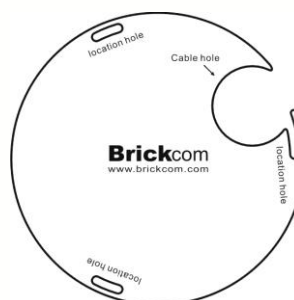
1. Use the enclosed Allen key to detach the dome cover from the camera device.



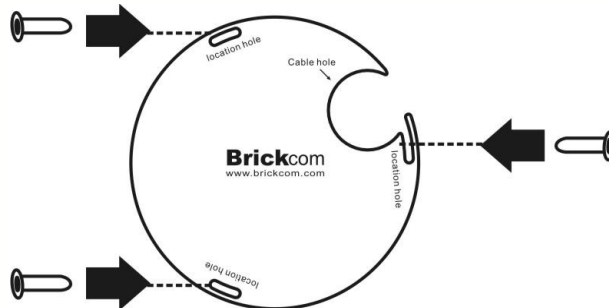
2. Remove the dry bag from its package. Use the double-sided tape to stick the dry bag onto the designate position inside of the dome cover.



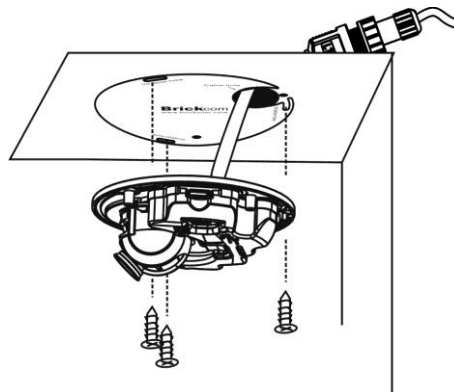
3. Choose the location on the wall or ceiling to place the camera. Attach the location sticker to the desired spot. For ceiling installation, the best place to mount the camera is into a ceiling stud.
4. Drill three holes through the center of the three location holes on the sticker.



5. Hammer the three plastic anchors which are provided in the product package into the three location holes.



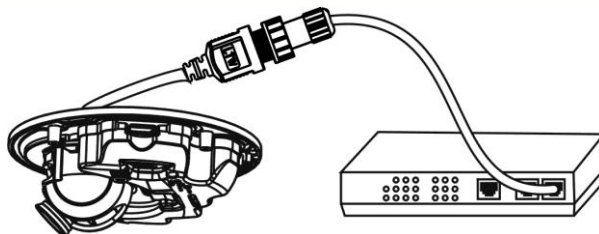
6. The user needs the three screws which are included in the product package and a screwdriver. Mount the camera on the wall or ceiling and position the three screw slots over the plastic anchors. Insert the screws into the holes and use the screwdriver to tighten the screws clockwise until they are secure.



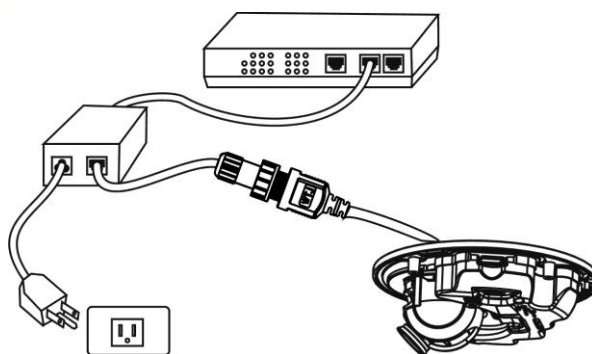
NOTE: For assembling the waterproof connector, please refer to the instructions included in the connector package.

Camera Connection

1. Connect the camera to a PoE-enabled hub via a single Ethernet.

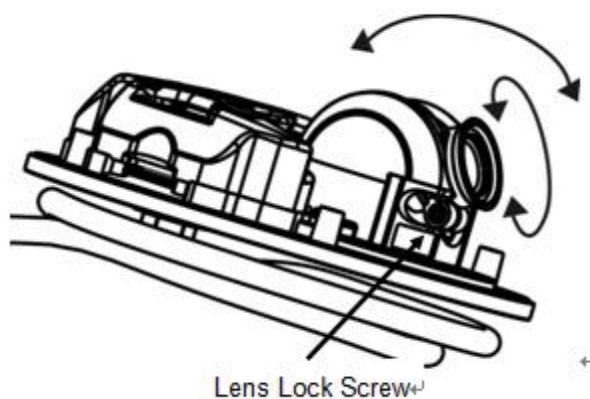


2. Connect the camera to a non-PoE hub using a PoE Injector.



Lens Adjustment

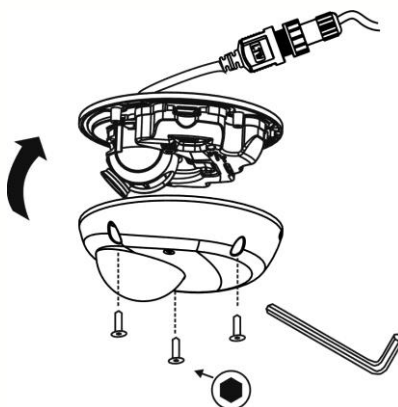
1. Adjust the lens to the desired position.
2. Focus
 - a. Loosen the lens lock screw.
 - b. Remove the lens hood.
 - c. Rotate the lens until the image in the Live View page is focused.
 - d. Retighten the lens screw lock.
 - e. Reattach the lens hood.



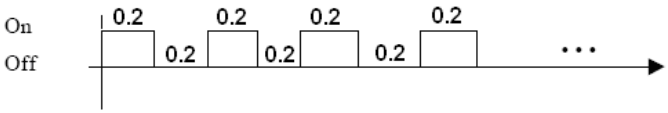
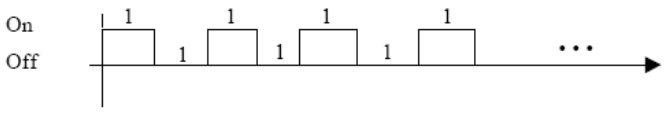
WARNING: Do not over rotate the lens.

Complete the Installation

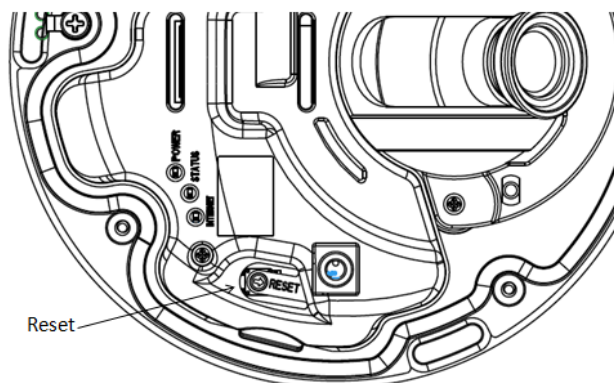
Place the dome cover back on the camera device using the Allen Key.



LED Behavior

Function	LED Behavior	Description	Remark
Status		Hardware failure	Blue
Status	Steady On	<ol style="list-style-type: none"> Reset to Default Restoring settings 	Blue
Status	Unlit	<ol style="list-style-type: none"> Power off Power on till System setup 	Blue
Status		Upgrading F/W	Blue
Link	Blinking	Blinking while network connection in progress	Blue
Link	Unlit	No connection	Blue
Power	Steady On	Normal Operation	Red
Power	Unlit	Power off	Red

Hardware Reset



The Reset Button can be used to reboot the camera or restore it to factory default settings. If the camera experiences a problem, rebooting the camera may correct the problem. If the problem remains, please restore the camera to factory default settings and reinstall the software.

To Reboot - Press and hold the Reset Button for one second using a paper clip or thin object. Wait for the camera to reboot.

To Restore – Press and hold the Reset Button for ten seconds until the LED light turns off. When successful restored, the LED will be blue during normal operation.

⚠️ NOTE: By restoring the camera, all settings will be restored to the factory default settings.

Micro-SD/SDHC Card Capacity (*)

The network camera is compatible with Micro-SD/SDHC (Maximum 32GB) cards.

System Requirements

Operating System:

Microsoft Windows XP Home Edition SP2

Microsoft Windows XP Professional SP2

Computer:

IBM PC/AT Compatible

CPU:

Pentium 3GHz or faster

Memory:

1024 MB or more

Monitor:

1024 x 768 pixels or more, 24-bit True color or better

Network Interface:

10/100Mbps Network interface card must be installed

Web Browser:

Microsoft Internet Explorer 6.0 SP2 or higher

Adobe Reader:

Adobe Reader 8.0 or higher

Audio:

The audio function will not work if a sound card is not installed in the PC. Audio may be interrupted depending on network traffic.

Software Installation

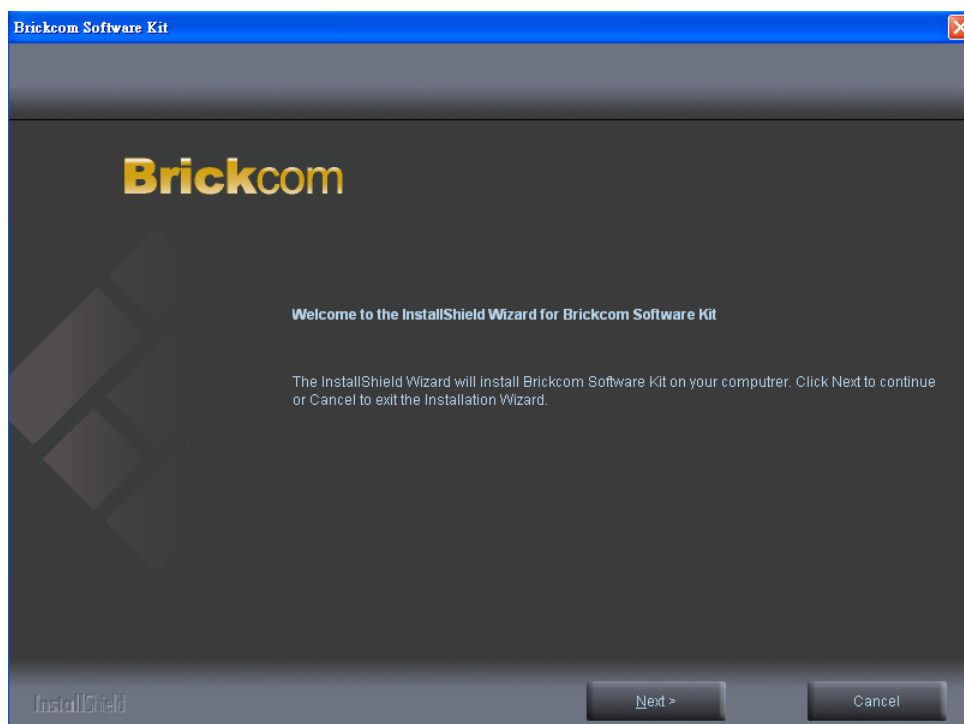
In this manual, "User" refers to whoever has access to the Network Camera, and "Administrator" refers to the person who can configure the camera and grant user access to the camera.

After checking the hardware connection, run the Installation Wizard program included on the product's CDROM to automatically search the intranet for the camera. There may be many cameras on the local network. Differentiate the cameras using the serial number which is printed on the labels on the carton and the bottom of the camera.

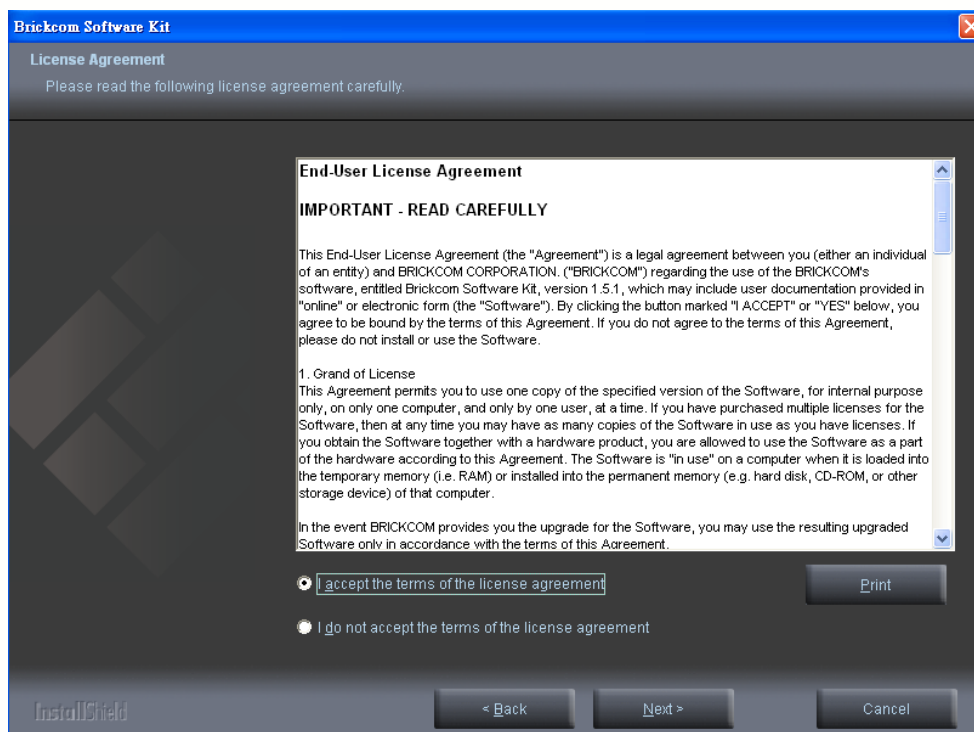
1. Insert the Installation CD into the CD-ROM driver. Run Auto-Run Tool directly from the CD-ROM to start the installation. When installing the Brickcom software kit for the first time, select a desired language for the interface. The available languages are listed in the scroll box. Click **<Install>** and follow the steps to install the EasyConfig wizard on the desired computer.



2. In the Install Shield Wizard dialog box, click <Next> to continue.



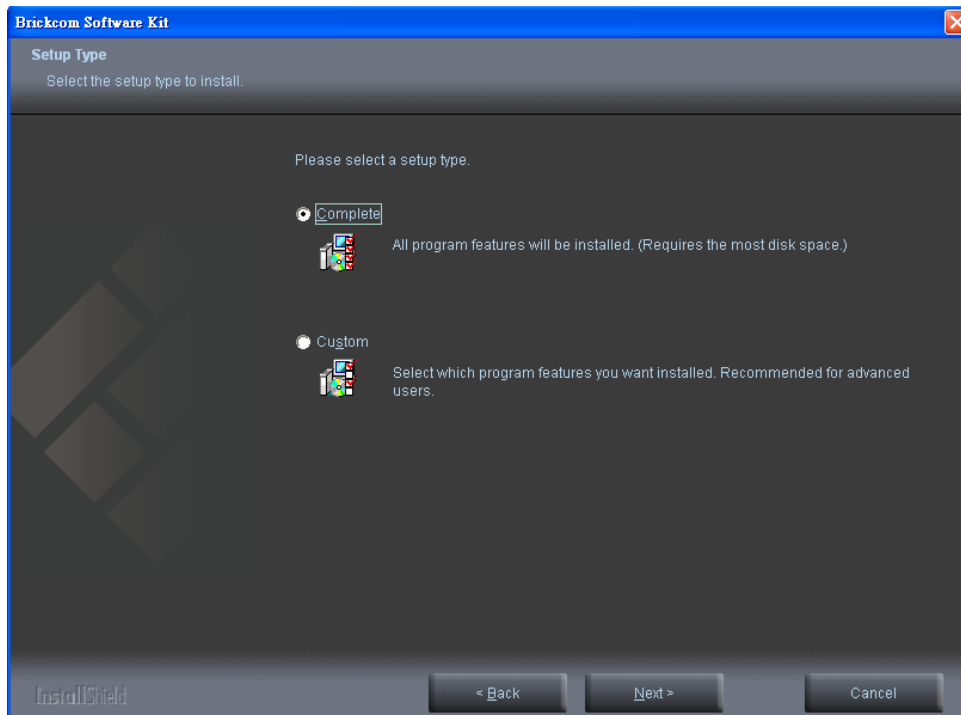
3. Read the End-User License Agreement and check the option "I accept the terms of the license agreement". Click <Next> to continue.



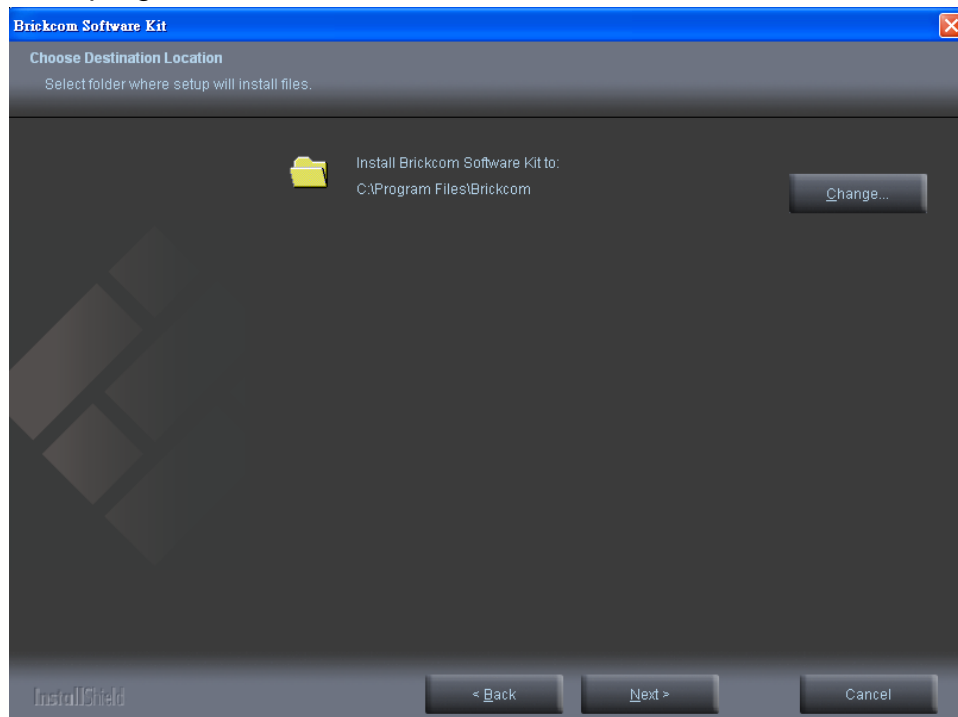
4. Select either “Complete” setup or “Custom” setup to install the system.

a. If **COMPLETE SETUP** is selected:

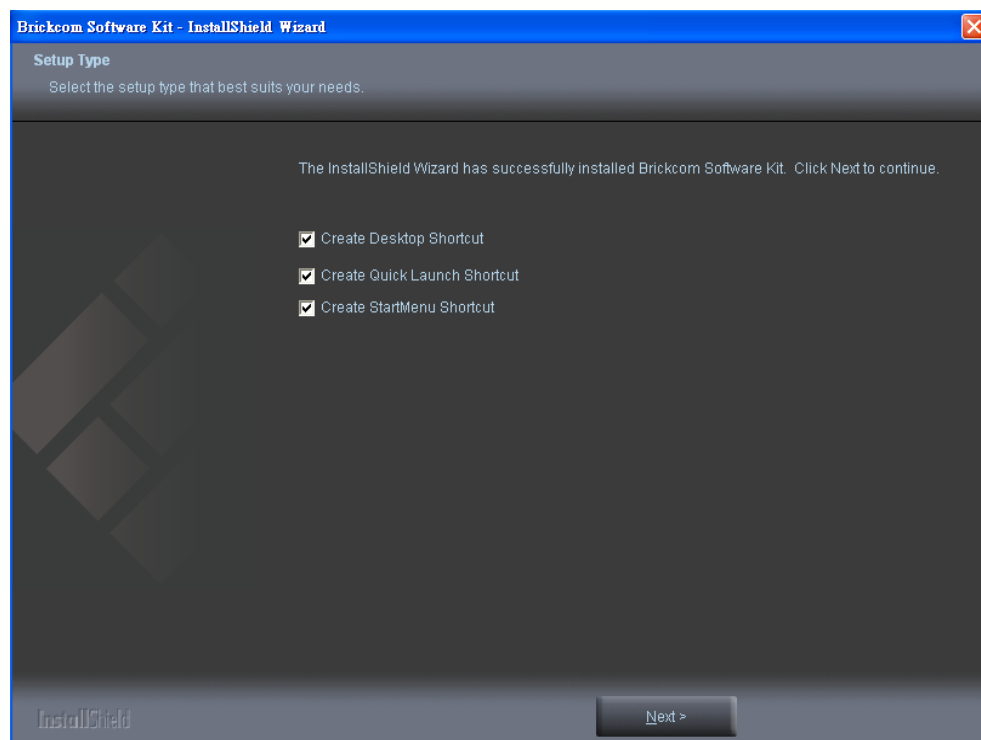
i. **All program features** will be installed into the default directory. Check the option “**Complete**” and then click <Next>.



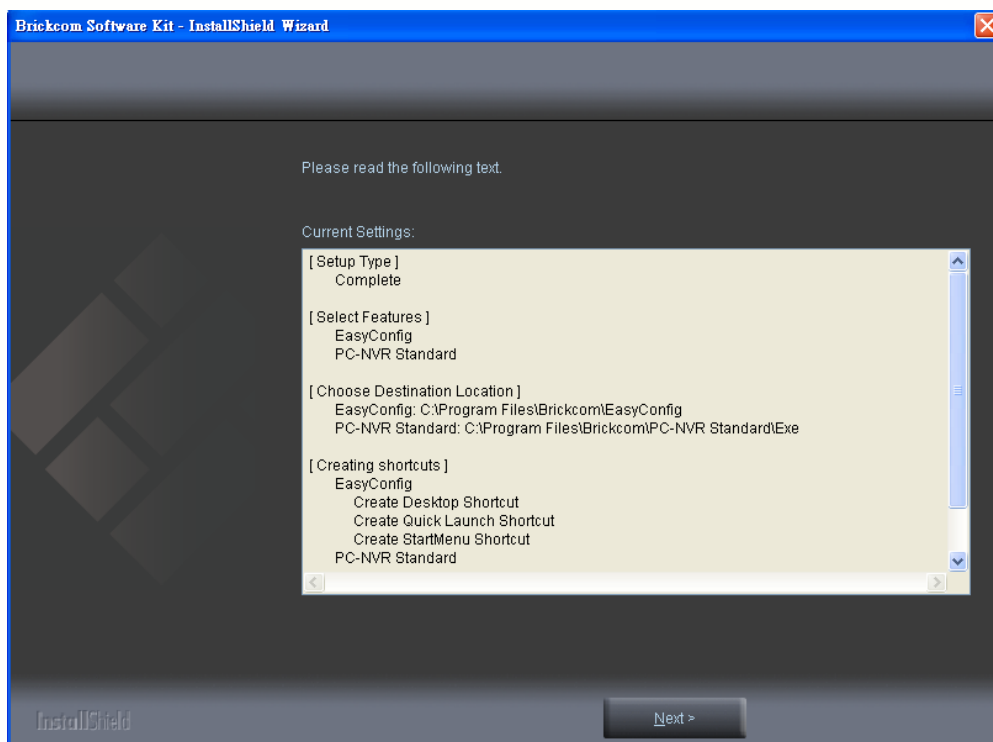
ii. Click <Change> to change the appointed folder where installation and program files will be stored. Click <Next> to continue.



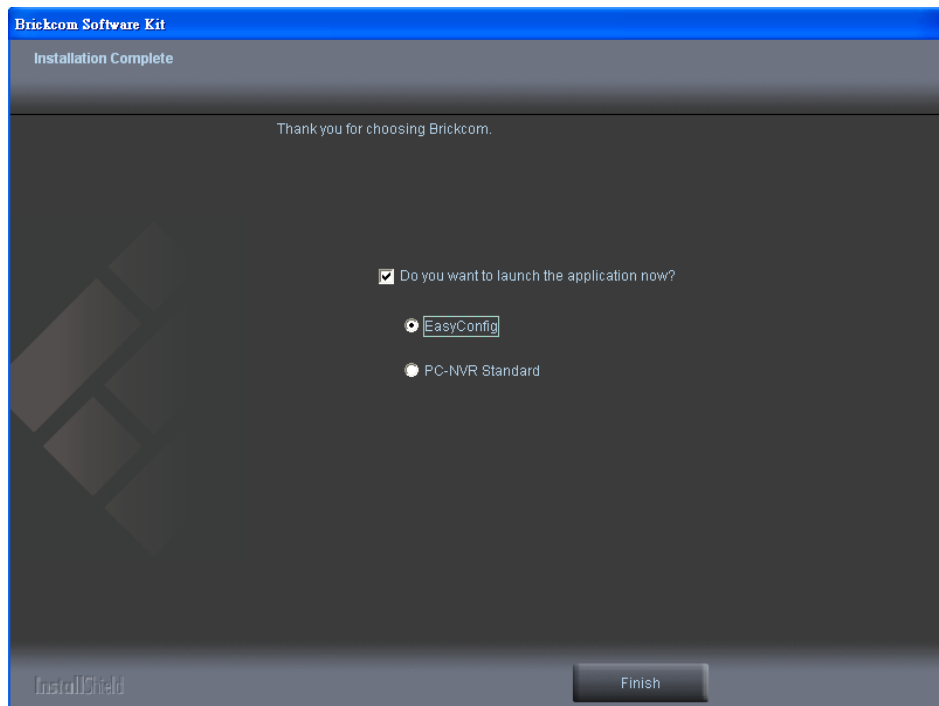
iii. Select to create shortcuts. Click <Next> to continue.



iv. The installation information will be displayed. Click <Next> to continue.

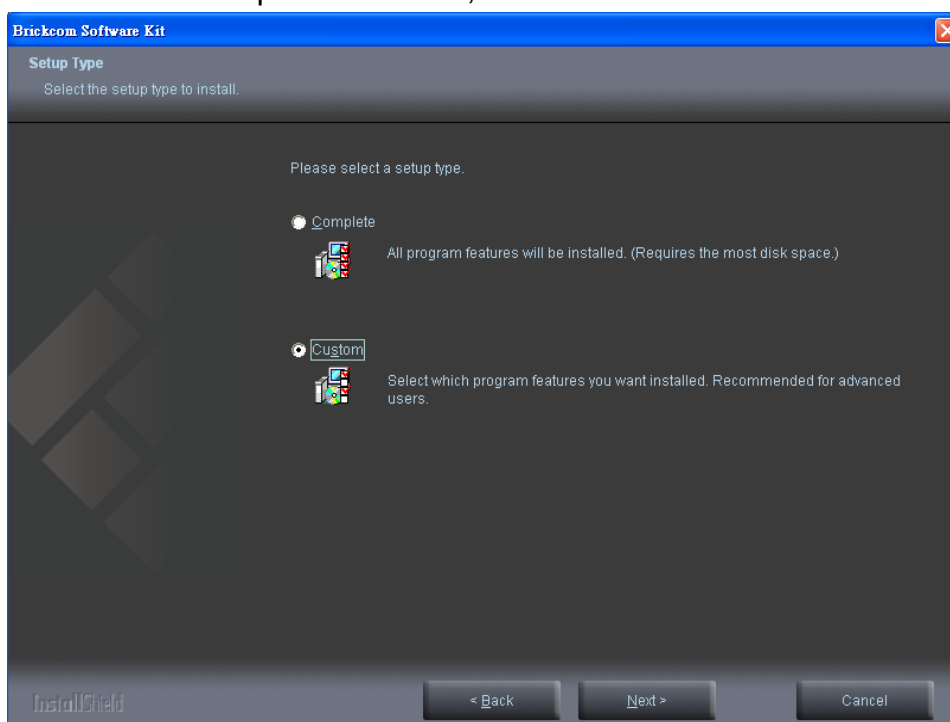


- v. To launch EasyConfig or PC-NVR Standard, select the application and click <Finish>. When launching the PC-NVR program, please refer to the PC-NVR user manual.

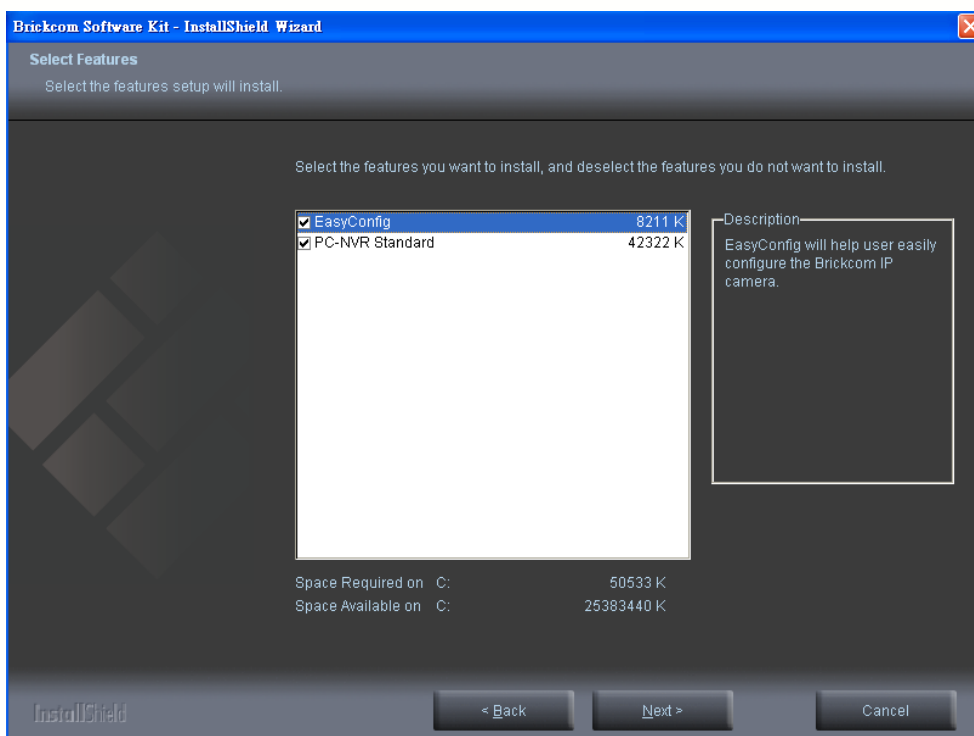


b. If CUSTOM SETUP is selected:

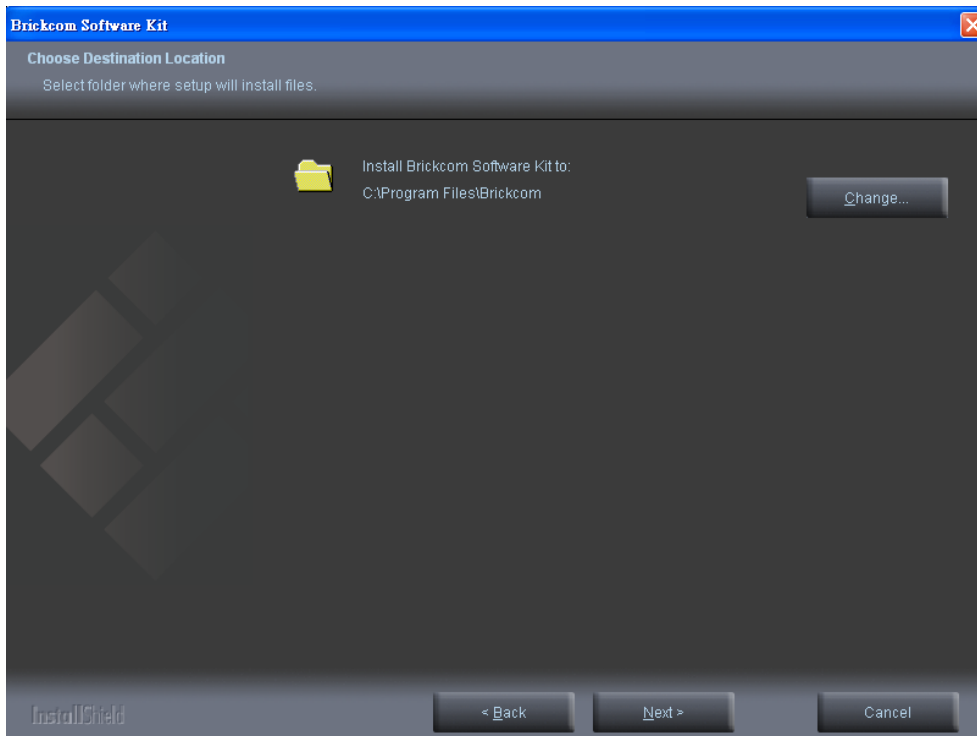
- i. This option is recommended for advanced users. It can be used to install the system to a preferred directory or to select specific program feature(s).
- ii. Check the option "Custom", and then click <Next>.



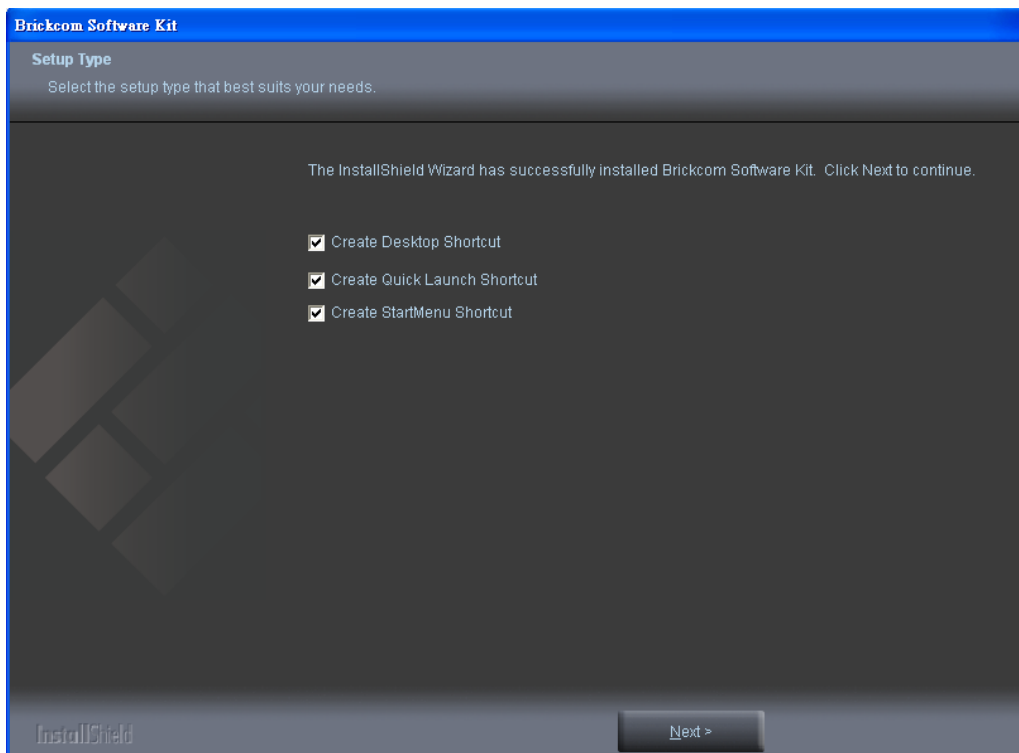
iii. Select the features to install. Click <Next> to continue.



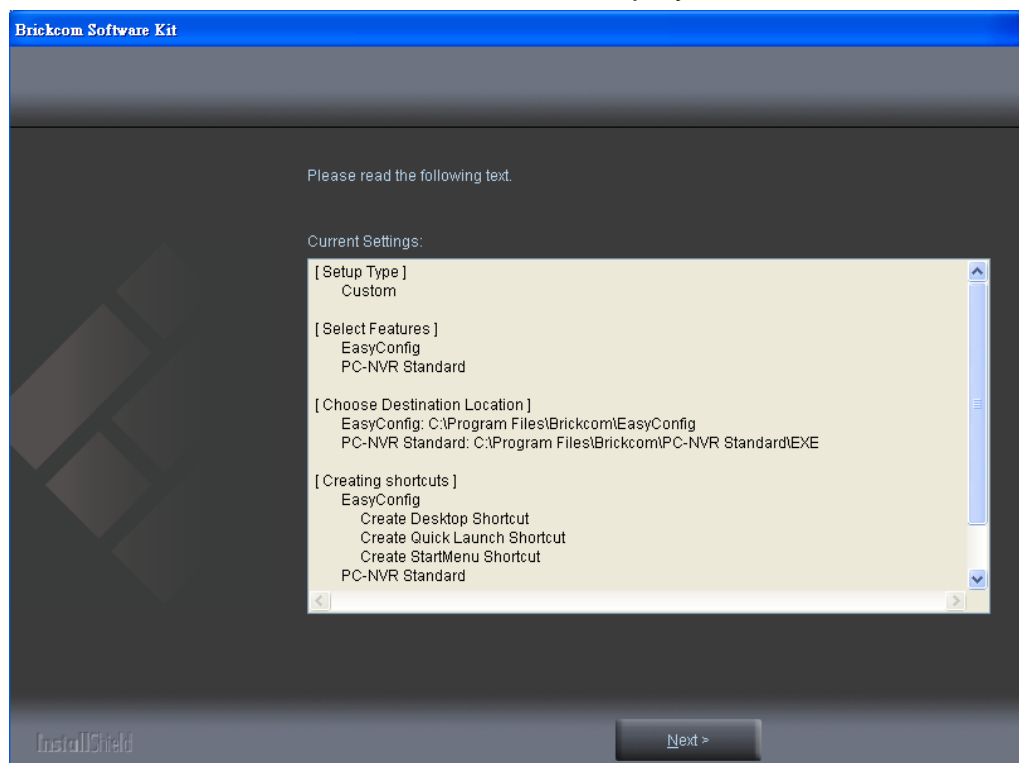
iv. Click <**Change**> to change the appointed folder where installation and program files will be stored. Click <Next> to continue.



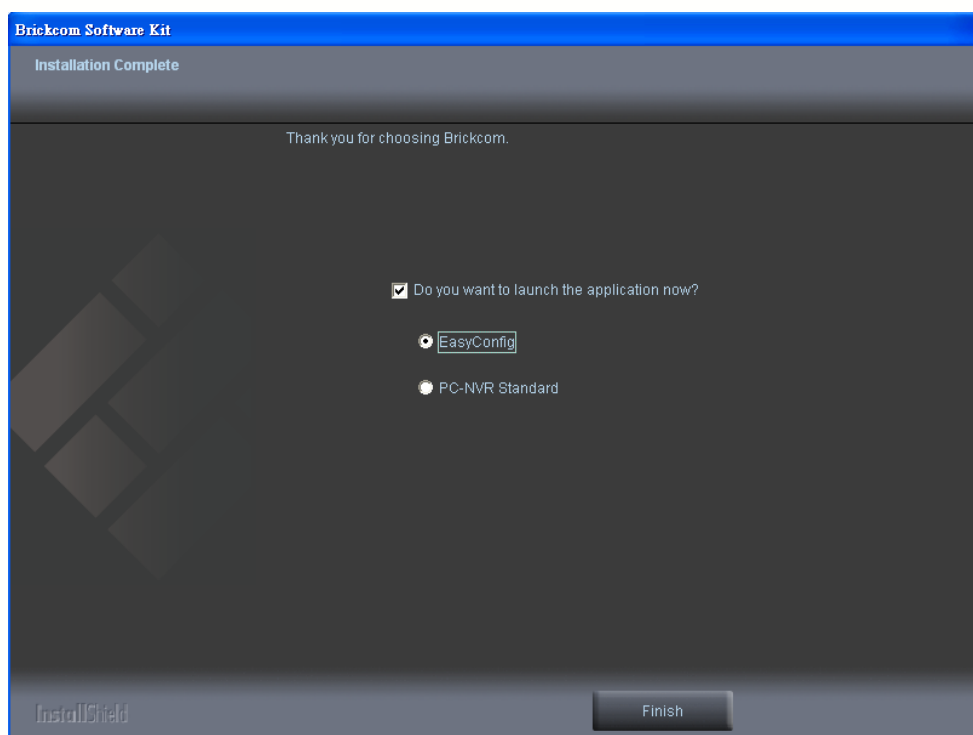
v. Select programs to create shortcuts. Click <Next> to continue.



vi. The installation information will be displayed. Click <Next> to continue.



5. To launch EasyConfig or PC-NVR Standard, select the application and click <Finish>. When launching the PC-NVR program, please refer to the PC-NVR user manual.



EasyConfig

To launch EasyConfig, select EasyConfig from the start menu. If Complete Setup type was used in the software installation, an EasyConfig icon was installed on the desktop. Double click to open the icon.



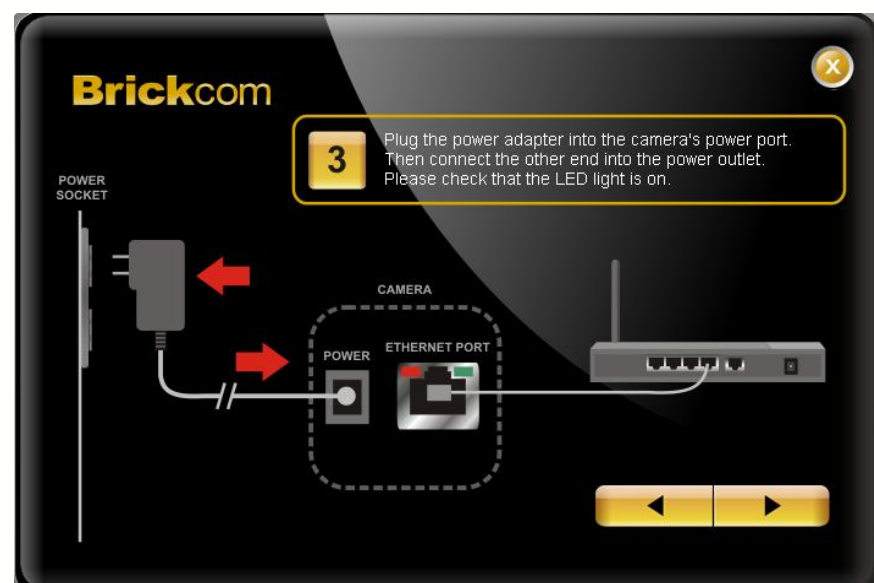
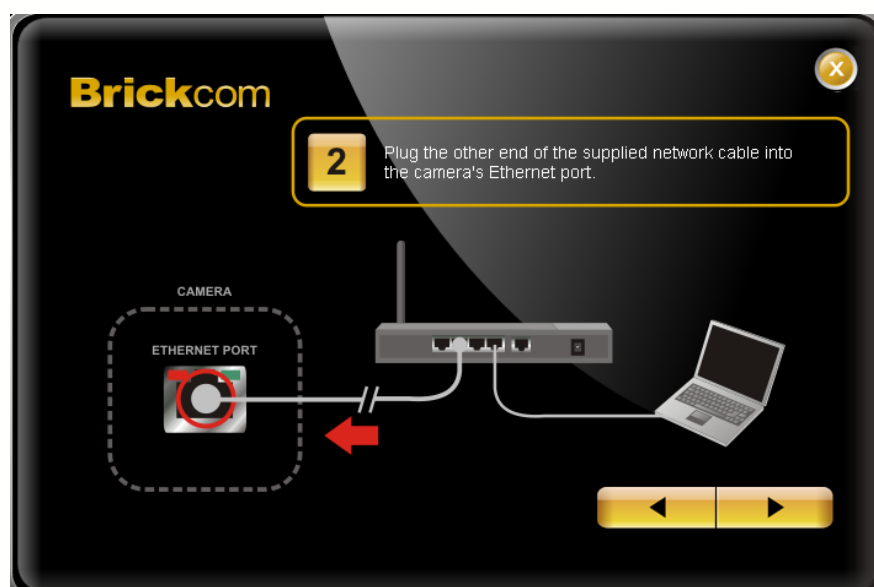
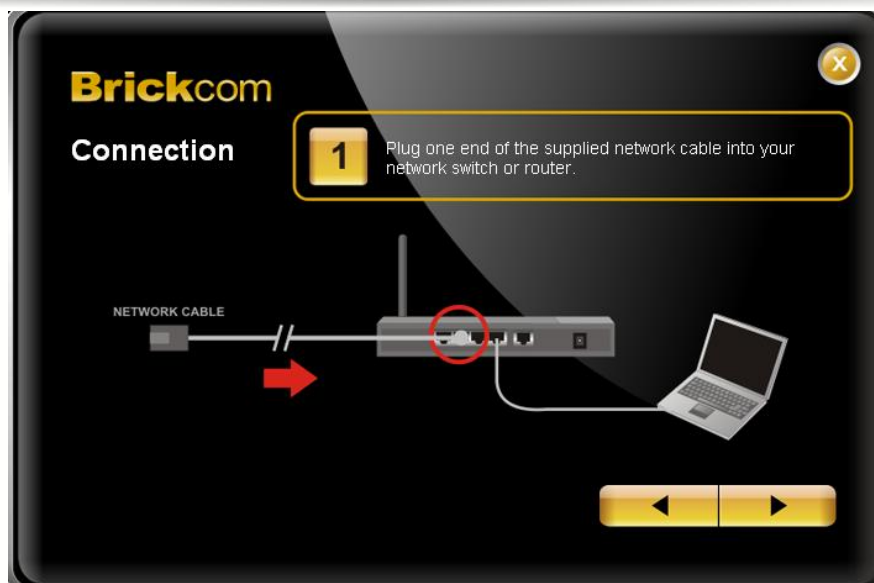
If Custom Setup type was used in the software installation and an EasyConfig icon was not installed on the desktop, the program will be installed under C:\Program Files\Brickcom\EasyConfig unless the program was saved to a preferred directory.

1. Click **<Start>** to continue. The program will automatically search for the camera in the intranet.

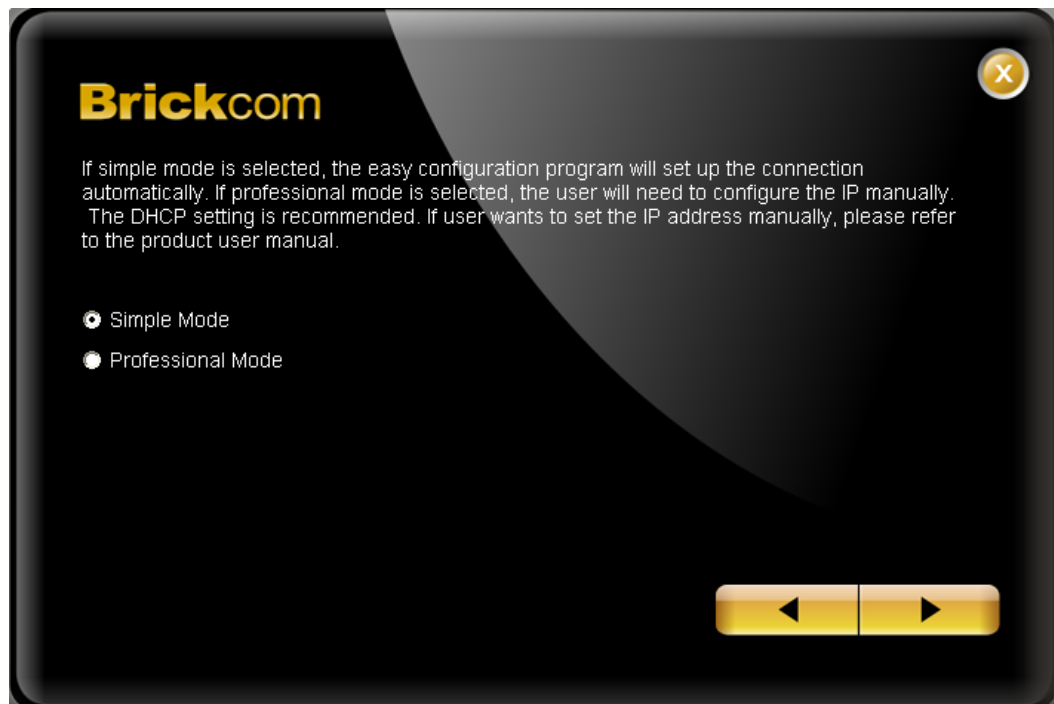


NOTE - Check “Skip the hardware installation guide” to skip checking the hardware connection. To check the hardware installation settings, do not check the option box.

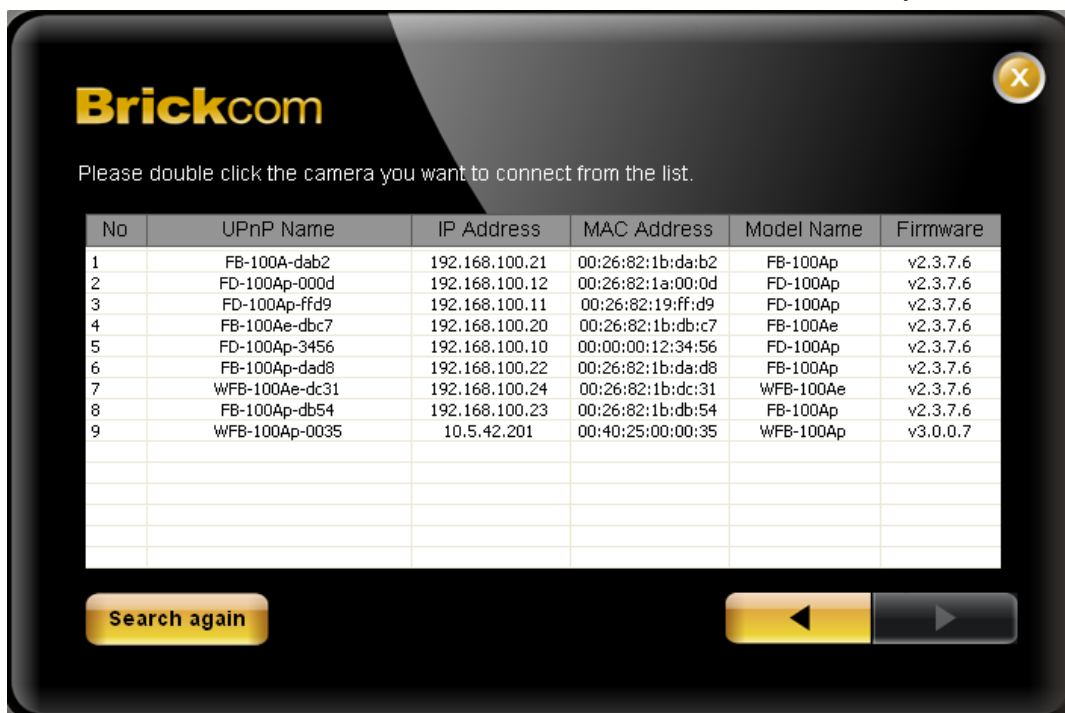




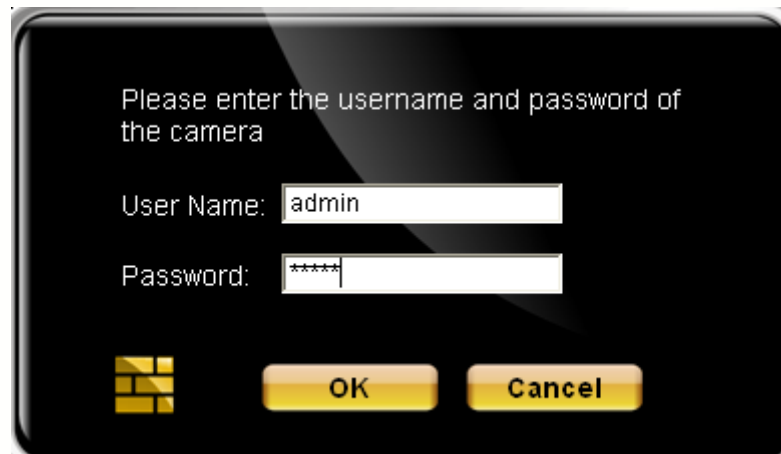
2. Select either "Simple Mode" or "Professional Mode" to obtain the camera's IP settings. If "Simple Mode" is selected, EasyConfig will set up the connection automatically. If "Professional Mode" is selected, the user will need to configure the IP settings manually.



3. There may be many cameras in the local network. Differentiate the cameras using their UPnP name. Double click on the camera from the survey list to connect.




4. Enter the username and password of the camera. For first time use, the default username and password are “**admin/admin.**”



Please enter the username and password of the camera

User Name:

Password:



5. For configuring the IP address settings, select either <Settings remain the same>, <Automatically obtain an IP Address (DHCP)> or <Set IP Address configuration manually>. The DHCP setting is recommended.



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Select the IP Address settings.

☒ Settings remain the same

☐ Automatically obtain an IP Address (DHCP)

☐ Set IP Address configuration manually

- a. If <Set IP Address configuration manually> is selected, the following pages will be displayed.

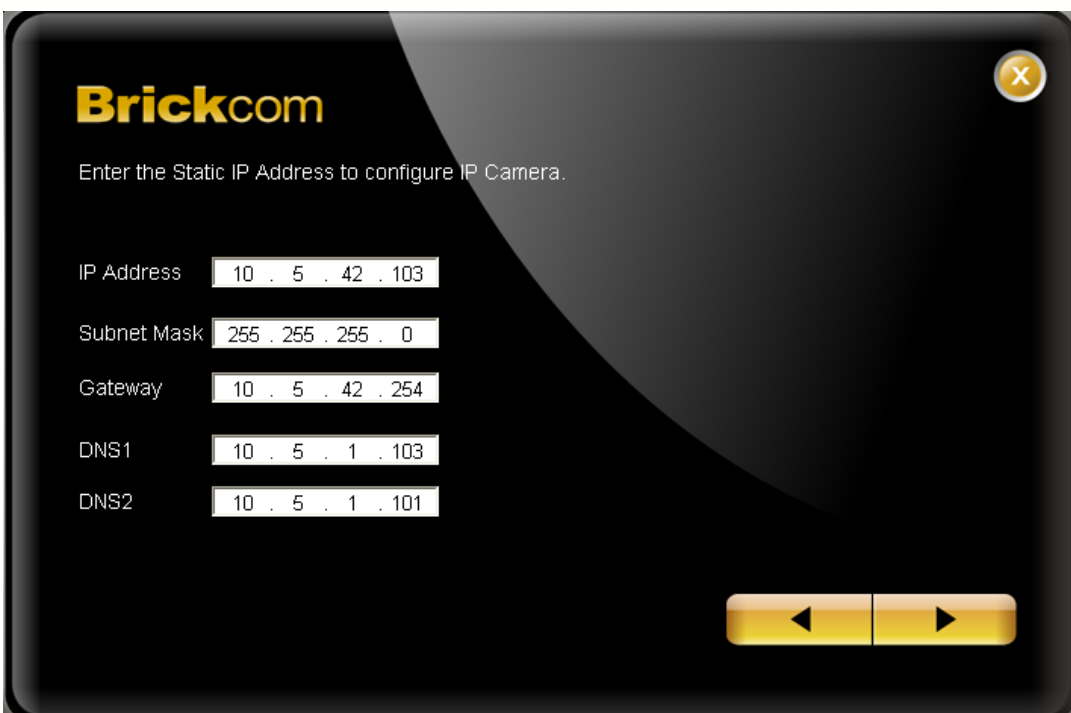


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Select the IP Address settings.

- ☐ Settings remains the same
- ☐ Automatically obtain an IP Address (DHCP)
- ☒ Set IP Address configuration manually

Navigation buttons: Previous (left arrow) and Next (right arrow).



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Enter the Static IP Address to configure IP Camera.

IP Address: 10 . 5 . 42 . 103

Subnet Mask: 255 . 255 . 255 . 0

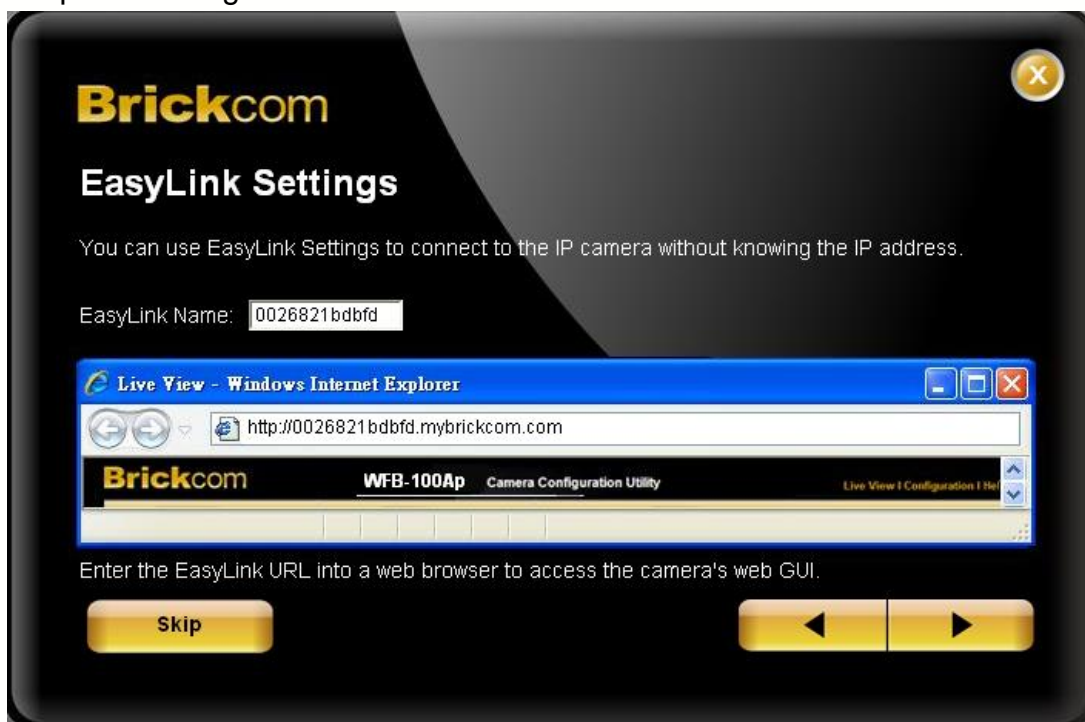
Gateway: 10 . 5 . 42 . 254

DNS1: 10 . 5 . 1 . 103

DNS2: 10 . 5 . 1 . 101

Navigation buttons: Previous (left arrow) and Next (right arrow).

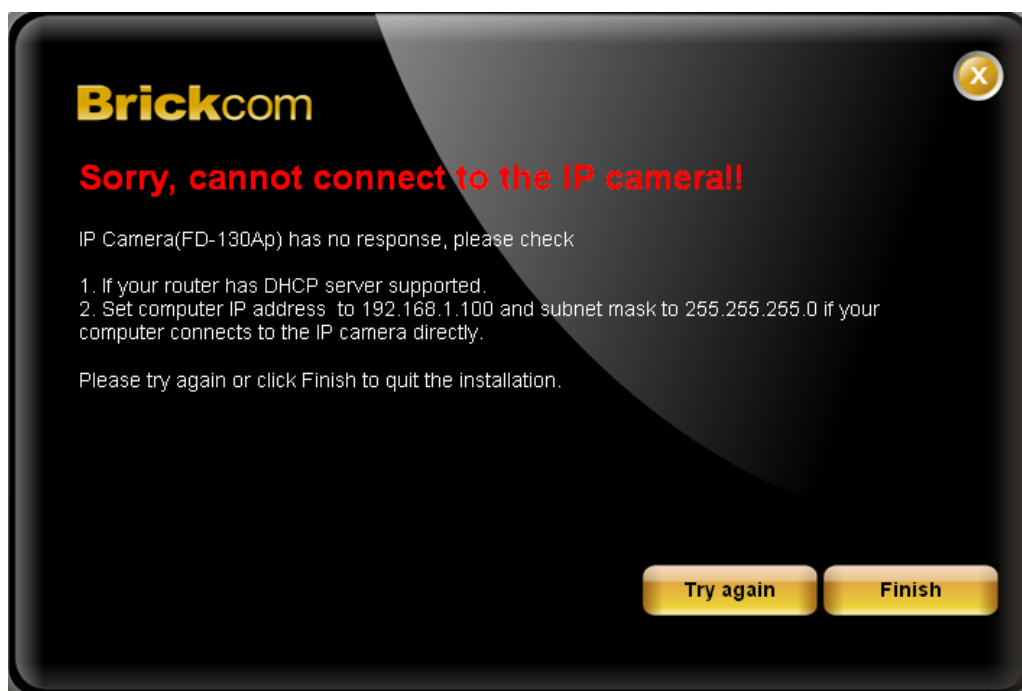
6. If the camera supports the EasyLink™ function, the following page will be displayed. Otherwise, this page will not be shown. *If desired, click <Skip> to skip this setting.



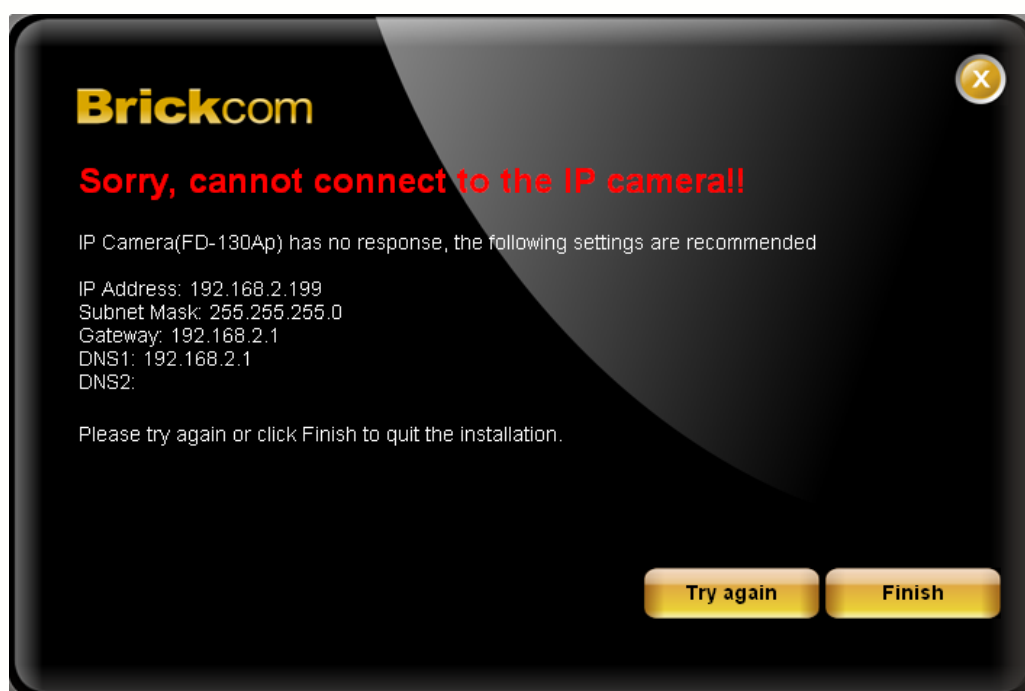
EasyLink™ is a unique Brickcom function which allows users to assign a unique EasyLink name to their network camera's IP address. There is no need to configure the router to open up ports or remember hard-to-memorize IP addresses. Users can log onto [uniqueEasyLinkname].mybrickcom.com to view the camera's web GUI and live view.

- Enter a unique EasyLink name whose length must be between 5-32 characters.
- When finished, click the arrow button to continue.

7. When the IP address settings have been configured, the screen will either display a successful or failed connection message. If the connection failed, either try again or quit the installation.
- If “DHCP IP address settings” was selected, the failure page will be displayed as below:



- If “Static IP address settings” was selected, the failure page will be displayed as below:



- c. If the connection was successful, the user will see the message:
"Congratulations. The installation of the camera is complete."

When this window is displayed, click **<PC-NVR>** to start the PC-NVR program, **<Live View>** to view the live video from the connected IP camera, or **<X>** in the top right corner of the screen to close the installation window. If the user starts the PC-NVR program, please refer to the PC-NVR user manual.



Once installation is complete, the Administrator should proceed to the next section "Accessing the Network Camera" for necessary changes and configurations.

Accessing the Network Camera

Check Network Settings

The camera can be connected either before or immediately after the software installation. The Administrator should complete the network settings on the configuration page, including entering the correct subnet mask and IP address of gateway and DNS. Ask the network administrator or Internet service provider for the detail information.

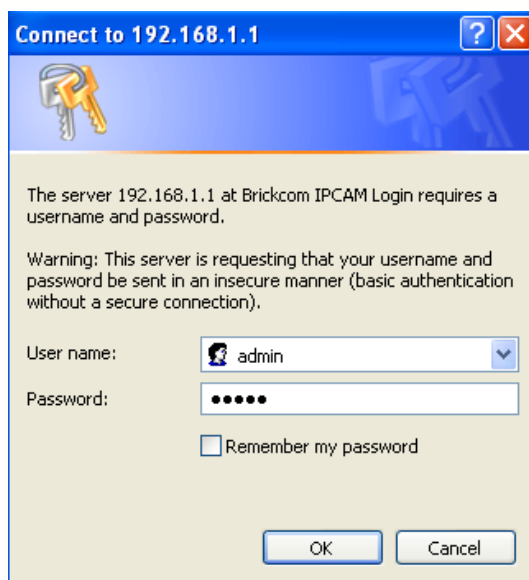
Add Password to Prevent Unauthorized Access

The Administrator should immediately implement a new password as a matter of prudent security practice. For first time use, the user name and password for the Administrator are assigned as “admin/admin”. After the Administrator changes the Administrator password, the web browser will display an authentication window to confirm the new password. Once the password is set, there is no provision to recover the Administrator’s password. If the Administrator’s password is lost, the only option is to restore the original factory default settings.

The Administrator can set up a maximum of ten (10) user accounts. Users will be able to access the Network Camera, but will not be allowed to access system configurations.


Authentication

To access the camera's live view, open a web browser and enter the IP address of the camera. A dialog window will pop requesting a username and password. As stated on the previous page, for the default username and password for the Administrator are assigned as **"admin/admin"**. For accounts other than the administrator's account, the user can choose to remember the password for future convenience. It is not recommended to check this box when viewing the camera feed from a public computer.




Installing the Plug-In

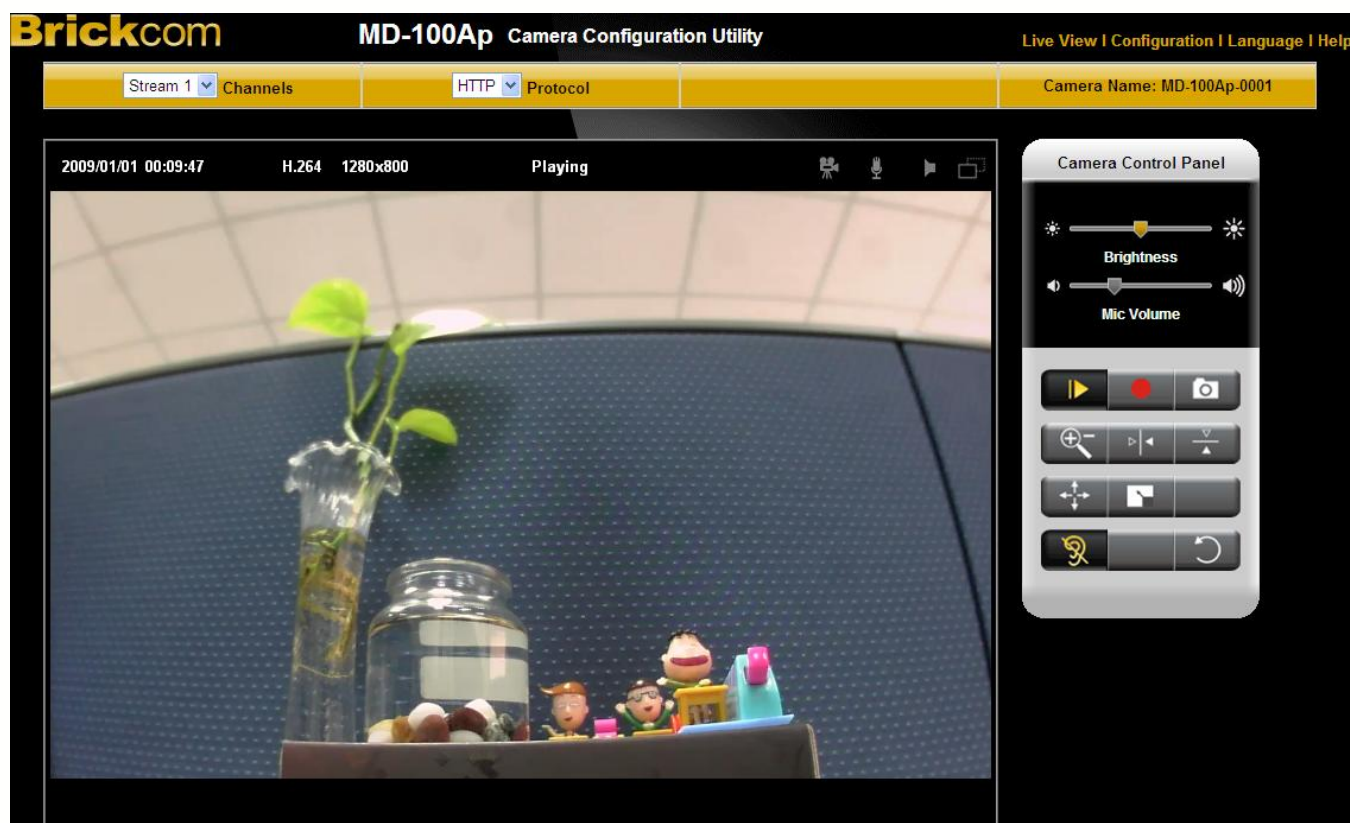
For the initial access to the camera in Windows, the web browser may prompt the administrator for permission to install a new plug-in for on Internet Explorer. Permission request depends on the Internet security settings of the user's PC or notebook. If the highest security level is set, the computer may prohibit any installation and execution attempt. This plug-in has been registered for certificate and is used to display the video in the browser.

Click on  to proceed. If the web browser does not allow the administrator to continue the installation, check the Internet security option and lower the security levels or contact the networking supervisor or IT for help.



 **NOTE** – If an error occurred or the plug-in fails to install, it is because the version of the Electronic Signature is newly released and the VeriSign has not been submitted to Microsoft Windows update for validation. Therefore, plug-in will not have its root certificate. If IE discovers that there is no root certificate after the user's PC connects to the camera, it will automatically redirect to VeriSign Web site to download and install the latest root certificate to make the installation successfully. If the user's computer is able to connect to camera but unable to access the internet, then the installation will fail because the computer will not be able to download the latest root certificate. This problem can be resolved if computer can be connect to the internet and the camera at the same time and will not recur when Windows update patches become available.

Live View



NOTE - (*) These are optional features. Please refer to the Product List for the full list of optional features available for the product.

Live View is the default page that opens when accessing the camera. Live video is displayed directly in the browser window.

- **Stream1/Stream2 Channels**

The network camera offers simultaneous dual stream for optimized quality and bandwidth. Go to Configuration → Camera/Video/Audio → Video to configure the codec compression and video resolution or refer to the Video configuration page.

- **HTTP/TCP/UDP protocol**

HTTP – This unicast method can be used to traverse firewalls. Firewalls are commonly configured to allow the HTTP protocol, thus allowing RTP to be tunneled.

TCP - This protocol guarantees the complete delivery of streaming data and provides better video quality. The downside of using this protocol is that the quality of its real-time effect is less than that of the UDP protocol.

UDP - This protocol allows for more real-time audio and video streams. However, network packets may be lost due to network burst traffic and images may be broken. Activate UDP connection time-sensitive responses are more important than video quality.



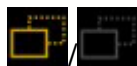
Recording on/off - Displays the status of recording video



MIC on /off - Displays the status of the MIC volume



Speaker on/off - Displays the status of the Speaker



MD on/off - Displays the status of Motion Detection

- **Brightness** - Drag the slider bar to adjust the image brightness level.
- **Mic volume** - Drag the slider bar to adjust the microphone volume.

For more Audio settings, please refer to the Audio configuration page.



Player Stop - Play or stop the video.



Recording - Record video to a computer.



Snapshot - Capture and save still images.



Digital Zoom - Enable the digital zoom operation.



Mirror - Horizontally reflect the display of the live video.



Flip - Vertically reflect the display of the live video.



Real Size - View the object in real size. Press it again to switch back to normal mode.



Full Screen - Switch to full screen mode. Press the “Esc” key to return to normal mode.



Motion Detection Alert - Enable the motion detection alert function.



Mute – Turn off the sound.



Set Default – Reset to default settings.



NOTE

1. The <Camera Control Panel> functions have no effect on the recorded video. Whatever changes are made to the <Camera Control Panel> **will not** be applied to the recorded video.

Configuration

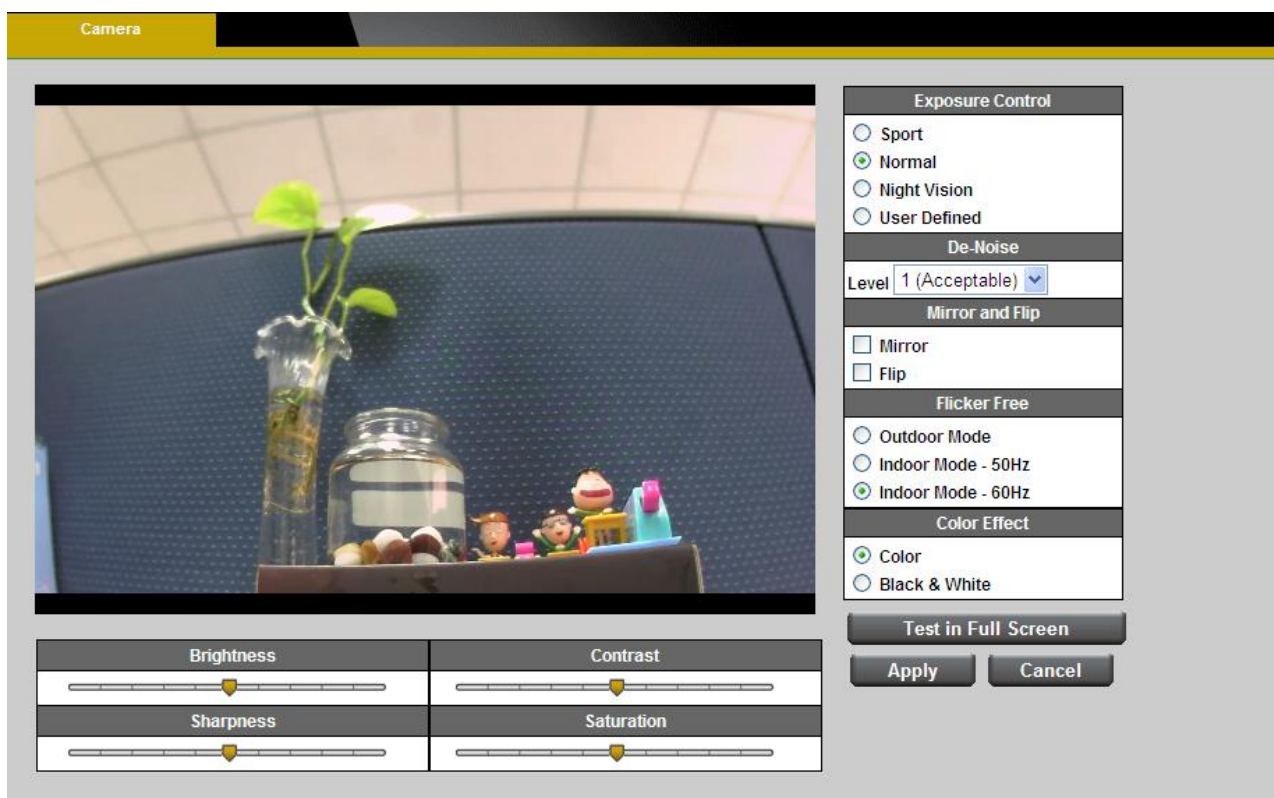
Click <**Configuration**> on the main page to change the camera setting pages.



Note: Only Administrators can access the Configuration page.

Camera/Video/Audio

Camera



Brightness - Drag the slider bar to adjust the image brightness level from -5 to +5.

Contrast - Drag the slider bar to adjust the image contrast level from -5 to +5.

Sharpness - Drag the slider bar to adjust the image sharpness level from -5 to +5.

Saturation - Drag the slider bar to adjust the image saturation level from -5 to +5.

Exposure Control

Sport – Select this option when monitoring rapid moving objects.

Normal – Select this option for normal monitoring conditions.

Night Vision – Select this option when monitoring at night or in low light conditions.

User Defined – Select this option to define the exposure manually.

AGC (Auto Gain Control) - The AGC can be set between 1X to 5X. Set the Gain Rate higher for a better video illumination, with 5X giving the best video illumination.



NOTE - higher gain rate may cause a higher judder or blur on fast moving images.

Shutter Speed

Fast – For high activity exposure function.

Normal – For normal exposure function.

Slow – For night vision exposure function.

AE Lock (Auto Exposure) - The camera will automatically adjust the exposure to the changes in ambient light.

De-Noise

Auto - The Network Camera will automatically filter the frame-to-frame defects to reduce the visual impact of blur.

The De-noise can be set between 1 to 3, with 3 giving the best video resolution.

Mirror and Flip

Mirror - Enable to horizontally reflect the display of the live video.

Flip - Enable to vertically reflect the display of the live video.

Flicker-Free – Eliminate the problem of flicker.

Click the Radio button to select outdoor or indoor mode based on the conditions.

Color Effect - Select to display color or black and white video streams.

Click **Apply** to apply settings or **Cancel** to cancel changes.



Video

The Network Camera offers two separate streams for different viewing options.

Stream	Video Overlay	RTSP Server	Save File Folder
Stream 1			
Enabled	<input checked="" type="checkbox"/>		
Video Codec	H.264		
Video Resolution	1280x800(WXGA)		
Frame Rate	25 fps		
<input type="radio"/> Quality <input checked="" type="radio"/> Bitrate	1500Kbps		
Stream 2			
Enabled	<input checked="" type="checkbox"/>		
Video Codec	MJPEG		
Video Resolution	1280x800(WXGA)		
Frame Rate	25 fps		
<input checked="" type="radio"/> Quality <input type="radio"/> Bitrate	3		
HTTP Transport	<input checked="" type="checkbox"/>		
Apply		Cancel	


Stream 1 & Stream 2

Video Codec (*) - The Network Camera offers three choices of video codec standards for real-time viewing: H.264, MPEG-4 and MJPEG.

Video Resolution - Select from the drop-down menu to choose the best resolution recording settings.


Frame Rate - Select the frame rate from drop-down menu. When H.264 or MJPEG is selected, the frame rate ranges from 1 to 30 fps. When MPEG-4 is selected, the frame rate ranges from 1 to 15 fps. Set a higher frame rate for smoother video quality.


Video quality and bit rate - Choose either “quality” or “bitrate” to control the video quality with video codec at H.264 or MPEG4. Only “quality” can be chosen when video codec at MJPEG is selected. Set the bitrate higher for a better video quality.

 **NOTE** - a higher bitrate will use higher network bandwidth. The video quality can be set between Level 1 to Level 6, with Level 6 producing the best image quality.

HTTP Transport – If MJPEG is used for Video Codec, users can enable HTTP Transport protocol for video communication.

Click **Apply** to apply settings or **Cancel** to cancel changes.

 **NOTE** – HTTP Transport is for non-IE browser used only.

 **NOTE** - For best recording experience, configure the Network Camera to one of the following frame rates based on the Flicker-Free setting:

Flicker-Free	Frame Rate
-----	-----
Outdoor	25, 10, 7, 5, 3, 2
Indoor (50/60 Hz)	25, 20, 10, 7, 5, 3, 2



Video Overlay

Stream		Video Overlay		RTSP Server		Save File Folder											
<div><div>Timestamp</div><table><tr><td>Enabled</td><td><input type="checkbox"/></td></tr><tr><td>Position</td><td>Left-Top ▼</td></tr></table><div>Text</div><table><tr><td>Enabled</td><td><input type="checkbox"/></td></tr><tr><td>Position</td><td>Left-Top ▼</td></tr><tr><td>Text</td><td><input type="text"/></td></tr></table><p>The video overlay only takes effect in stream 1</p><div><div>Apply</div><div>Cancel</div></div></div>								Enabled	<input type="checkbox"/>	Position	Left-Top ▼	Enabled	<input type="checkbox"/>	Position	Left-Top ▼	Text	<input type="text"/>
Enabled	<input type="checkbox"/>																
Position	Left-Top ▼																
Enabled	<input type="checkbox"/>																
Position	Left-Top ▼																
Text	<input type="text"/>																

Timestamp

To display the date and time on the screen during live view, check “Enable” to enable the timestamp function and select the display position from the drop-down menu.

Text

To make a note about the camera, check “Enable” and select the display position from the drop-down menu. Enter a video description in the text box.

Click **Apply** to apply settings or **Cancel** to cancel changes.



NOTE - The video overlay will only takes effect in stream 1.

RTSP Server

RTSP Server	
Port	554
Authentication	NONE

Apply Cancel

To utilize RTSP authentication, the user must first set a password for the camera. RTSP (Real-Time Streaming Protocol) controls the delivery of streaming media. By default the port number is set to 554.

Authentication - Depending on the network security requirements, the camera provides two types of security settings for streaming via RTSP protocol: NONE and DIGEST.

If DIGEST authentication is selected, user credentials are encrypted using MD5 algorithm, thus providing better protection against unauthorized access.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Save File Folder

Recording Folder Path	
Path	D:\My Documents\Brickcom

Snapshot Folder Path	
Path	D:\My Documents\Brickcom
Type	JPEG

Apply Cancel

Recording folder path - The destination for saving the recording video files. Click Browse to specify the saving path.

Snapshot folder path - The destination for saving the snapshot files. Click Browse to specify the saving path and select the format from the drop-down menu.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Audio (*)

The administrator can set up two separate streams for the camera for different viewing devices.

The administrator can enable or disable the audio function on either stream. If audio enable is selected, select the Audio codec from the drop-down menu.

Stream	
Stream 1	
Enabled	<input type="checkbox"/>
Audio Codec	G.711 ▼
Stream 2	
Enabled	<input type="checkbox"/>
Audio Codec	G.711 ▼
<div>Apply Cancel</div>	

Multicast

Multicast

Stream 1

Enabled

☐

Multicast Address

234

.

1

.

2

.

3

Port

10000

Stream 2

Enabled

☐

Multicast Address

234

.

1

.

2

.

3

Port

20000

Apply

Cancel

Multicast sends a video stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address. Therefore, multicast can effectively save Internet bandwidth. The RTSP (Real-Time Streaming Protocol) controls the delivery of streaming media.

Click “Enable” to enable Multicast stream 1 or Multicast stream 2. The default value for multicast address and port are 234.1.2.3 and 10000. Use different port number for different streams. It is recommended to use the default values.



NOTE - Using the IP address of the Network Camera enables access to the video.

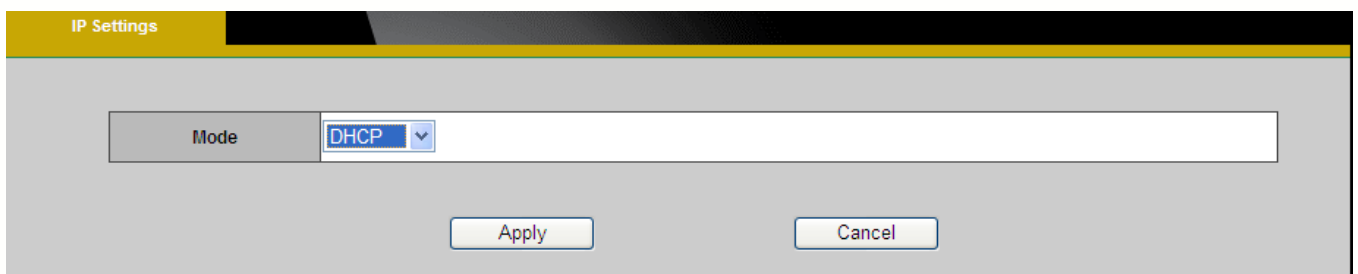
Example: `rtsp://192.168.1.1/channel1`

Click **Apply** to apply settings or **Cancel** to cancel changes.

Network

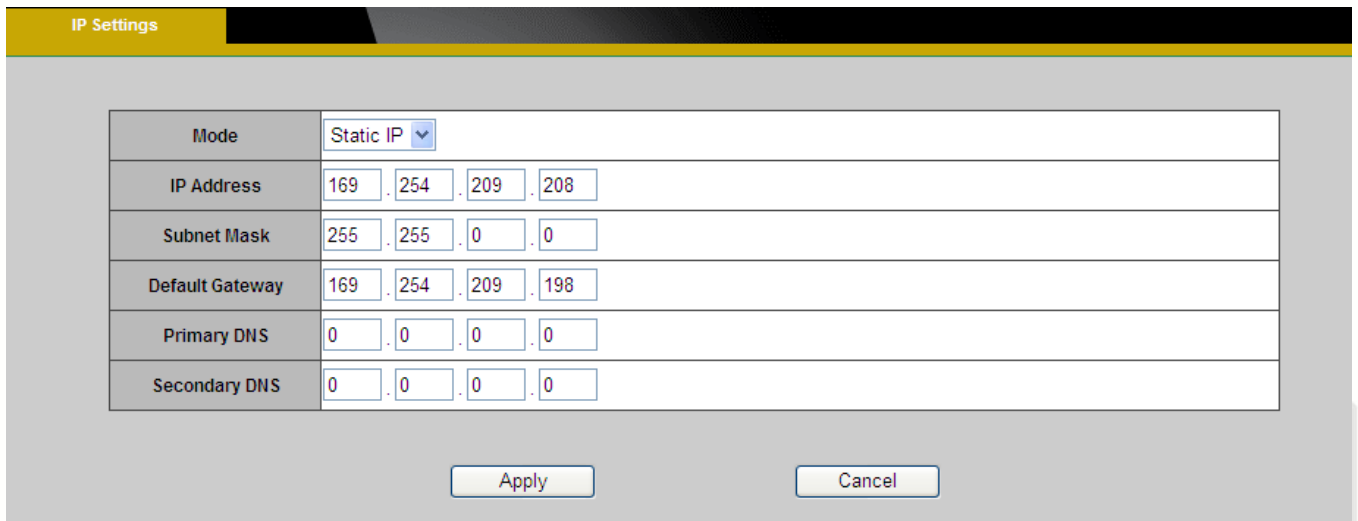
IP Settings

This section explains how to configure a wired network connection for the camera. There are several ways to setup the camera over the Internet: (1) obtain an available dynamic IP address assigned by a DHCP server, (2) use a static IP, or use PPPoE (Point-to-point over Ethernet). Select the desire setup mode from the IP settings drop-down menu.



The screenshot shows the 'IP Settings' window. At the top, there is a yellow header with the text 'IP Settings'. Below the header, there is a 'Mode' label followed by a dropdown menu currently set to 'DHCP'. At the bottom of the window, there are two buttons: 'Apply' and 'Cancel'.

1. **DHCP** – If this option is selected, the camera will automatically obtain an available dynamic IP address from the DHCP server each time it connects to the LAN.

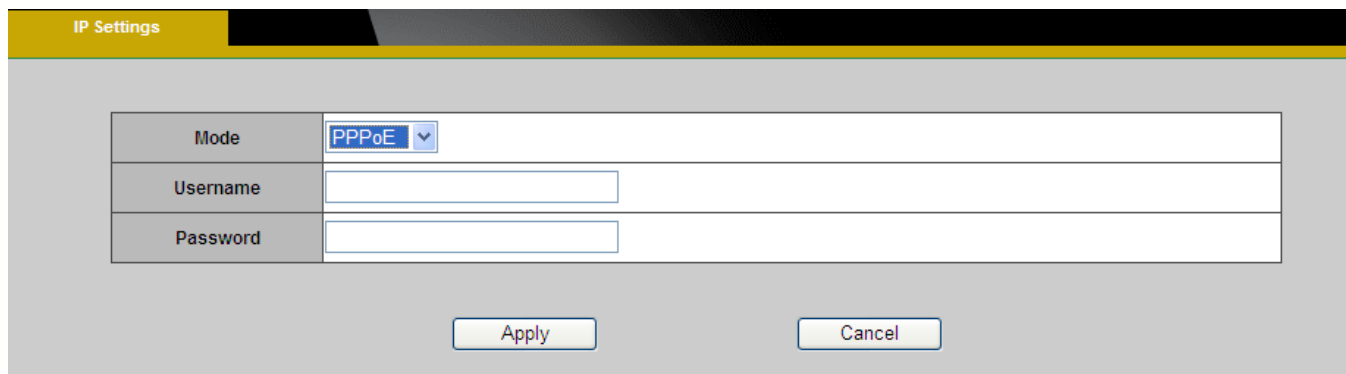


The screenshot shows the 'IP Settings' window with the 'Mode' dropdown set to 'Static IP'. Below the dropdown, there is a table with the following fields and values:


Mode	Static IP
IP Address	169 . 254 . 209 . 208
Subnet Mask	255 . 255 . 0 . 0
Default Gateway	169 . 254 . 209 . 198
Primary DNS	0 . 0 . 0 . 0
Secondary DNS	0 . 0 . 0 . 0

At the bottom of the window, there are two buttons: 'Apply' and 'Cancel'.

2. **Static IP** - Select this option to manually assign a static IP address to the camera. Enter the static IP address, Subnet mask, Default Gateway, Primary and Secondary DNS provided by the ISP.

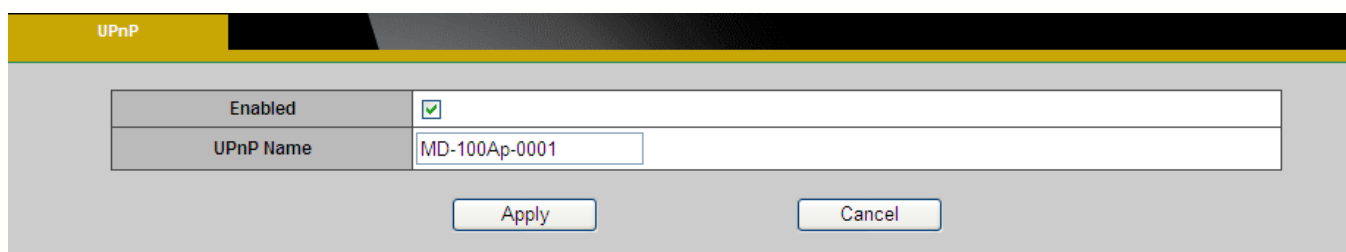


IP Settings	
Mode	PPPoE ▼
Username	
Password	
<div>Apply Cancel</div>	

3. **PPPoE** (Point-to-point over Ethernet): Use this mode if connecting to the Internet through a DSL Line.  **NOTE** - To utilize this feature, it requires an account provided by an Internet Service Provider. Enter the user name and password provided by the ISP. Click **Apply** to apply settings or **Cancel** to cancel changes.

UPnP


Universal Plug and Play (UPnP) simplifies the process of adding a camera to a local area network. Once connected to a LAN, the camera will automatically appear on the intranet. Click “Enable” to enable this function and enter an UPnP name which the camera will appear under on the intranet.



UPnP	
Enabled	<input checked="" type="checkbox"/>
UPnP Name	MD-100Ap-0001
<div>Apply Cancel</div>	

Click **Apply** to apply settings or **Cancel** to cancel changes.

DDNS (dynamic domain name service)

DDNS links a domain name to an IP address, allowing users to easily access their camera even with a changing IP address. Brickcom network cameras are compatible with two DDNS service providers (1) DynDNS, and (2) TZO.  **NOTE** - Before utilizing this function; please apply for a dynamic domain account from a DDNS provider.

DynDNS	TZO
Enabled	<input type="checkbox"/>
Username	<input type="text"/>
Password	<input type="password"/>
Hostname	<input type="text"/>
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

DynDNS – Enable the DynDNS to allow the camera to have a fixed host and domain name. Refer to the DynDNS website (www.dyndns.com) to apply for a dynamic domain account. When an account has been created, enter the username, password and hostname. Click **Apply** to apply settings or **Cancel** to cancel changes.

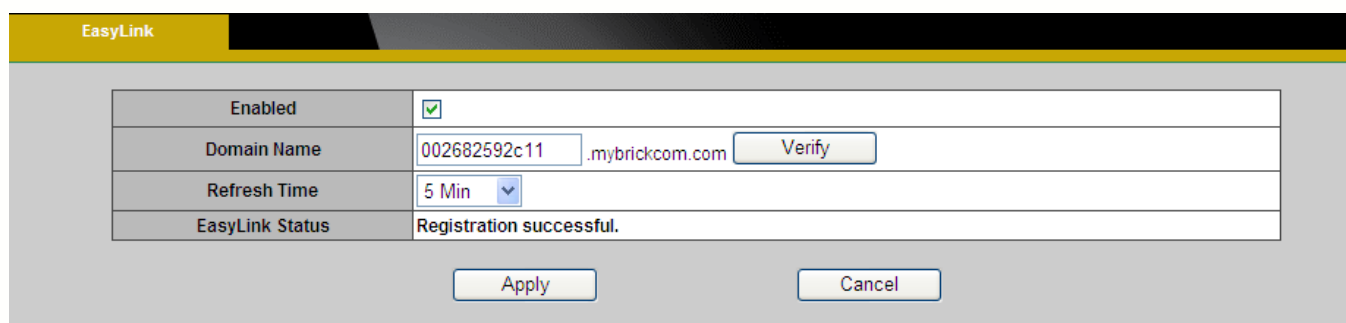
TZO

DynDNS	TZO
Enabled	<input type="checkbox"/>
Email Address	<input type="text"/>
TZO Password	<input type="password"/>
Domain Name	<input type="text"/>
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

TZO is a DDNS provider which allows users to create a dynamic DNS. Refer to the TZO website (<http://www.tzo.com/>) to apply for a dynamic domain account. When an account has been created, enter the e-mail address, password and domain name. Click **Apply** to apply settings or **Cancel** to cancel changes.

EasyLink™ is a unique Brickcom function which allows users to assign a unique domain name to their network camera's IP address. There is no need to configure the router to open up ports or remember hard-to-memorize IP addresses. When this function is enabled, users can log onto [uniquedomainname].mybrickcom.com to view the camera's web GUI and live view.

1. Check the box to enable EasyLink™.
2. Enter a unique domain name whose length must be between 5-32 characters. Verify that the domain name is available.
3. Select a desired amount of time from the Refresh Time drop-down menu to confirm the connection status.



Enabled	<input checked="" type="checkbox"/>
Domain Name	002682592c11 .mybrickcom.com <button>Verify</button>
Refresh Time	5 Min
EasyLink Status	Registration successful.

Apply Cancel

Click **Apply** to apply settings or **Cancel** to cancel changes.



NOTE - The EasyLink function will not work if the following conditions occur:

1. The camera cannot be located behind a double NAT network.
2. The camera's IP address cannot be assigned to specific port numbers using the router's port forwarding.
3. EasyLink uses UPnP to exchange port information with the router. The camera must connect to the internet through a router which supports UPnP.

HTTP/HTTPS

HTTP/HTTPS

HTTP

Enabled	<input checked="" type="checkbox"/>
Port	<input type="text" value="80"/>

HTTPS

Enabled	<input type="checkbox"/>
Port	<input type="text" value="443"/>

Apply

Cancel

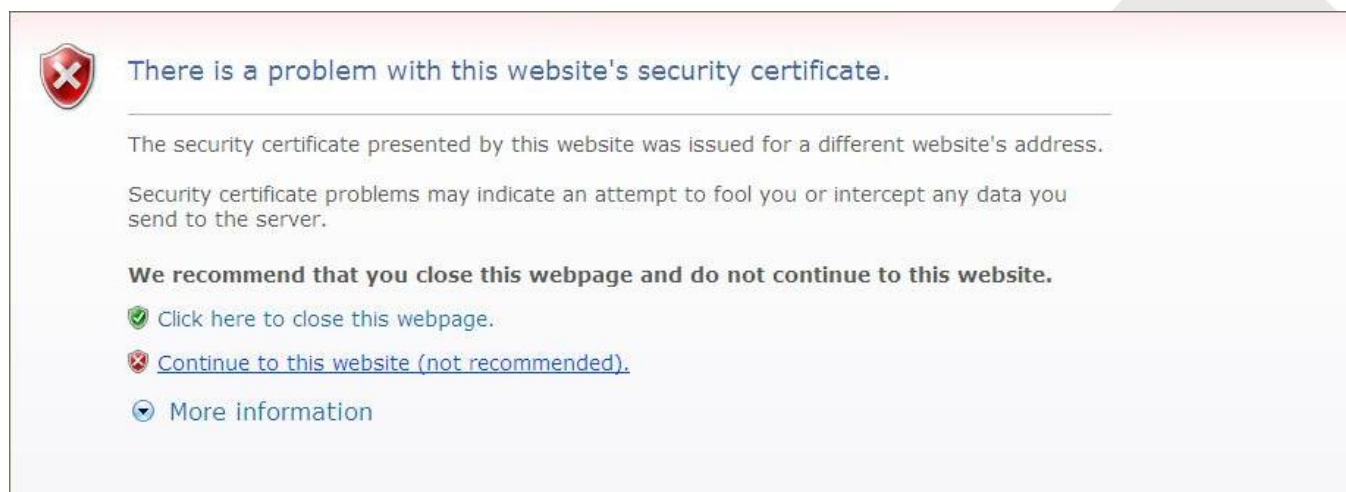
HTTP – (HyperText Transfer Protocol) - This protocol allows for TCP protocol quality without having to open specific ports for streaming. Users inside a firewall can utilize this protocol to allow streaming data through.

HTTPS - (Hypertext Transfer Protocol over SSL) - This protocol allows authentication and encrypted communication over SSL (Secure Socket Layer). It helps protect streaming data transmission over the Internet on a higher security level than HTTP.

Click “Enable” to enable and **Apply** to apply settings or **Cancel** to cancel changes.

To enable HTTPS, users have to create and install a certificate.

1. Click “Continue to this website” to install.



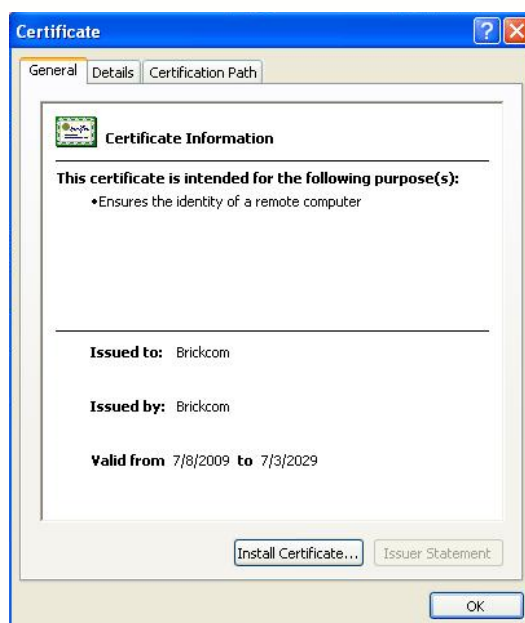
2. Enter the User name and Password of the camera.



3. Click "Certificate Error" on the top right corner of the window to view the certificate.



4. Click "Install Certificate" and follow the steps to finish the installation.



Event

Event Settings

When an event (such as unauthorized movement) occurs, the camera can be scheduled to perform certain actions. An Event Type is a set of parameters that defines these actions.

This section describes how to configure the camera to perform certain actions when events occur.

The screenshot shows the 'Event Settings' page. At the top, there is a yellow header with 'Event Settings'. Below it is a table titled 'Event List' with columns: 'Enabled', 'Name', 'Event Type', and 'Action'. Below the table are two buttons: 'Add Event' and 'Delete Event'.

Click <Add Event> on the Event Settings page. The Event Setup page will appear.

The screenshot shows the 'Event Setup' page. It has the same 'Event List' table at the top. Below the table, the 'Add Event' button is highlighted with a dashed border. Below the table, there are several configuration options:

- Enabled:** A checkbox.
- Name:** A text input field.
- Event Schedule:** Three radio buttons: 'Always' (selected), 'Schedule', and 'Recurrence Pattern'.
- Event:** A dropdown menu showing 'Motion Detection'.
- Action:** A section with several checkboxes and input fields:
 - ☐ Save Stream to: FTP (dropdown)
 - ☐ Send Snapshot to: FTP (dropdown)
 - ☐ Send HTTP Notification
 - ☐ Send to Email
 - ☐ Send UDP Notification to IP address: [] . [] . [] . [] Port []
 - ☐ Send Multicast Notification to IP address: [] . [] . [] . [] Port []

At the bottom, there are two buttons: 'Apply' and 'Cancel'.

How to Set Up an Event Schedule

Event Schedule describes how and when the camera performs certain actions.

1. Check "Enable" and enter a descriptive name for the event schedule.
2. Set Event Schedule to define when the event is activated by selecting from Always (24 hours), Schedule or Recurrence pattern.

- a. If Schedule is selected from the Event Schedule, the following page will be displayed:

The screenshot shows the 'Event Schedule' configuration interface. It includes an 'Enabled' checkbox, a 'Name' text field, and three radio buttons for 'Always', 'Schedule' (selected), and 'Recurrence Pattern'. Below the radio buttons is a calendar grid showing days of the week (Sun-Sat) and time slots (0:00 to 24:00). Green squares indicate scheduled times. A legend shows a green square for 'Event Schedule' and a white square for 'Not Scheduled'. Below the grid are 'Select All', 'Clear All', and 'Undo All' buttons. The 'Event' dropdown is set to 'Motion Detection'. The 'Action' section has checkboxes for 'Save Stream to FTP', 'Send Snapshot to FTP', 'Send HTTP Notification', 'Send to Email', 'Send UDP Notification to IP address', and 'Send Multicast Notification to IP address'. The bottom of the page has 'Apply' and 'Cancel' buttons.

- i. A Scheduled Event can be programmed for certain times and day. Click individual boxes to schedule specific times for the camera to detect events.

b. If Recurrence Pattern is selected, the following page will be displayed.

Event Settings

Event List			
Enabled	Name	Event Type	Action
<input checked="" type="checkbox"/>	12345	Motion Detection	Send to Email
<input checked="" type="checkbox"/>	abcdef	Schedule	Save Stream
<input checked="" type="checkbox"/>	asdfg	Motion Detection	Send HTTP Notification

Add Event
Delete Event

Enabled

☒

Name

Event Schedule

☐ Always
☐ Schedule
☒ Recurrence Pattern

Sun ☒ Mon ☒ Tue ☒ Wed ☐ Thu ☐ Fri ☐ Sat ☐

Start : Duration Minutes

Event

Motion Detection

Action

☐ Save Stream to
☐ Send Snapshot to
☒ Send HTTP Notification
☐ Send to Email
☐ Send UDP Notification to IP address
 . . . Port
☐ Send Multicast Notification to IP address
 . . . Port

Apply
Cancel

- i. An event schedule can be programmed to recur at different times according to the user's needs. Select the days for the event schedule to occur. Select a start time and specify the duration.
3. Define what will trigger an event to occur by selecting an option from the Event drop-down list.
4. Select the Actions that will occur when the event is triggered.

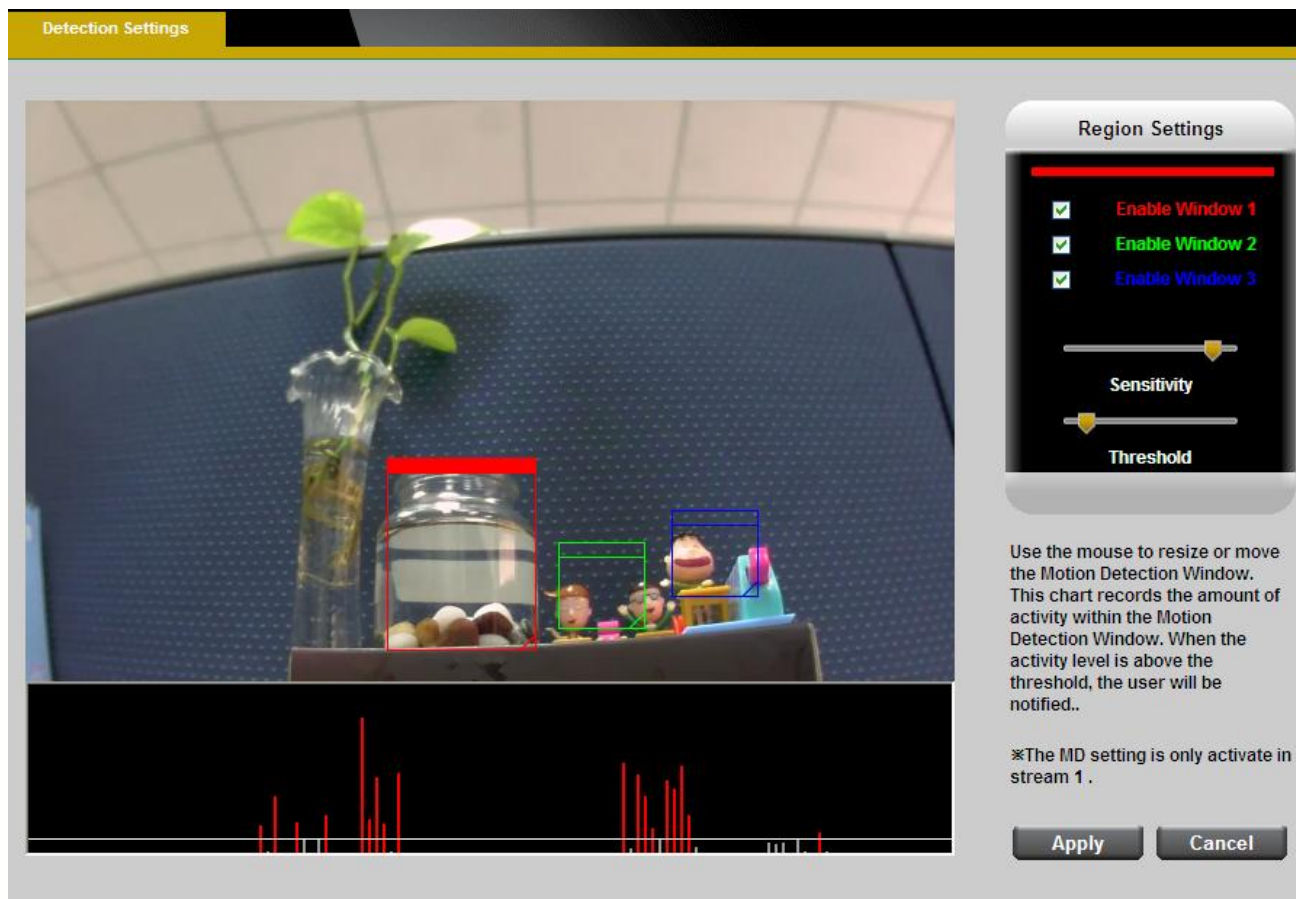
a. When <Send to Email> is selected, the following page will be shown:

Enabled	<input checked="" type="checkbox"/>
Name	<input type="text" value="asdfg"/>
Event Schedule	<input type="radio"/> Always <input type="radio"/> Schedule <input checked="" type="radio"/> Recurrence Pattern Sun <input checked="" type="checkbox"/> Mon <input checked="" type="checkbox"/> Tue <input checked="" type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat <input type="checkbox"/> Start <input type="text" value="01"/> : <input type="text" value="00"/> Duration <input type="text" value="10"/> Minutes
Event	<input type="text" value="Motion Detection"/>
Action	<input type="checkbox"/> Save Stream to <input type="text" value="SD card"/> <input type="checkbox"/> Send Snapshot to <input type="text" value="FTP"/> <input checked="" type="checkbox"/> Send HTTP Notification <input checked="" type="checkbox"/> Send to Email <input type="checkbox"/> Send UDP Notification to IP address <input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/> Port <input type="text"/> <input type="checkbox"/> Send Multicast Notification to IP address <input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/> Port <input type="text"/>
Email	From <input type="text"/> To <input type="text"/> CC <input type="text"/> My Name <input type="text"/> Subject <input type="text"/>

- i. From - Enter the email address of the sender.
 - ii. To - Enter the email address of the recipient. To enter multiple recipients, separate each using a comma.
 - iii. My Name - Enter the sender's name that will appear in the recipient's inbox.
 - iv. Subject - Enter the title of the email.
5. When complete, click **Apply** to save new event or **Cancel** to delete the event. The new event will appear on the event list.
 6. To edit an event setting; select the event from the list. To remove an event setting from the list, select an event name from the list and then click <Delete Event>. Click <Add Event> to add more events.

Motion Detection

Motion can be detected by measuring changes in the speed or vector of an object or objects in the monitored area. This section explains how to configure the Network Camera to enable motion detection.



Detection Setting – Use this setting to enable and define the motion detection windows. The user can defined up to three areas on the live view window for motion detection.

1. Select <Window1>, <Window2>, or <Window3> to adjust the motion detection window.
2. Check the box to enable the window.
3. Use the mouse to resize or move the motion detection window.
4. Adjust the “Sensitivity” level. Lower sensitivity levels will result in more activity needed to trigger an event.
5. Adjust the “Threshold” to change the threshold level. The higher the threshold, the larger objects need to be to trigger an event.

6. The chart below the Live View window indicates the activity level of the Motion Detection window. When motion is detected by the camera and exceeds the defined threshold, a red bar will appear. Users can use this feature as a trigger source to send photos or videos to a remote server via email or FTP.

Click **Apply** to apply settings or **Cancel** to cancel changes.



Notifications

Use the tools in this section to specify what type of notification will be sent when an event occurs. The camera can send buffered images to an FTP server, Samba, Email, or HTTP.

FTP Settings

File Transfer Protocol (FTP) is used as an application component to automatically transfer files for program internal functions. Select “Primary FTP Server” from the Server Selection drop down menu to send media files to a FTP server when an event is triggered. Enter the FTP IP address or hostname. By default, the FTP port server is set to 21. Enter the account name, password and FTP Path to configure the settings.

FTP Settings	
Server Selection	Primary FTP Server
FTP Address	IP Address 0 . 0 . 0 . 0
FTP Port	21
Account Name	
Account Password	
FTP Path	
<div>Apply Test Cancel</div>	

Click **Apply** to apply settings or **Cancel** to cancel changes.

E-mail Settings

Select “Primary Email Server” option from the Server Selection drop down menu to send media files to an email server when an event is triggered.

SMTP Server - Enter the server host name of the email server.

SMTP Port - Enter the port number of the email server; by default, the SMTP port is set to 25.

Authentication - Select the authentication type from the drop-down menu.

Email Account - Enter the user name of the email account if necessary.

Email Password - Enter the password of the email account if necessary.

Email Settings

Server Selection	Primary Email Server
SMTP Server	
SMTP Port	25
Authentication	LOGIN
Email Account	
Email Password	

Click **Apply** to apply settings or **Cancel** to cancel changes.

Samba Settings

Select this option to send the media files via a network neighborhood when an event is triggered.

Server Address - Enter the IP address of the Samba server.

User Name - Enter the user name of the Samba server.

Password - Enter the password of the Samba server.

Workgroup - Enter the workgroup of the Samba server.

Shared Folder - Enter the share folder of the Samba server.

Samba Settings	
Server Address	<div>IP Address <input type="button" value="v"/></div> <div><input type="text" value="0"/><input type="text" value="0"/><input type="text" value="0"/><input type="text" value="0"/></div>
Username	<input type="text"/>
Password	<input type="text"/>
WorkGroup	<input type="text"/>
Shared Folder	<input type="text"/>
<div><input type="button" value="Apply"/><input type="button" value="Test"/><input type="button" value="Cancel"/></div>	

Click **Apply** to apply settings or **Cancel** to cancel changes.

HTTP Settings

Select this option to send the media files via an HTTP notification when an event is triggered.

HTTP Settings	
URL	<input type="text"/>
Message	<input type="text"/>
Username	<input type="text"/>
Password	<input type="text"/>
<div><input type="button" value="Apply"/> <input type="button" value="Cancel"/></div>	

URL –Specify the URL to send HTTP requests. The URL is normally written as:

http://ip_address/ notification.cgi?parameter

ip_address – type the IP address or host name of the HTTP host.

Parameter – type the notification parameter if necessary.

Example

URL - <http://192.168.1.1/xxxx.cgi>

Message - name1=value1&name2=vlaue2

Result - <http://192.168.1.1/xxxx.cgi? name1=value1&name2=vlaue2>

Ex:

<https://192.168.1.1/notification.cgi?event=MD&camera=FB-100A>

Message - Enter the message notification that will be sent when an event is triggered.

Enter the user name and password if necessary.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Video Clip

Video Clip		
Pre-Alarm Buffer	<input type="text" value="5"/>	Seconds (0-10)
Post-Alarm Buffer	<input type="text" value="5"/>	Seconds (0-30)
Maximum Buffer Size	<input type="text" value="1024"/>	Kbytes (128-1500)
<div><input type="button" value="Apply"/> <input type="button" value="Cancel"/></div>		

This function is used to determine when video clips will be recorded and stored after an event is triggered.

Pre-alarm buffer - Images can be stored internally on the server from the time immediately preceding the trigger. Enter the desired length of time.

Post-alarm buffer - Images can be stored internally on the server from the time immediately following the trigger. Enter the desired length of time.

Maximum buffer size –Specify the maximum file size allowed.

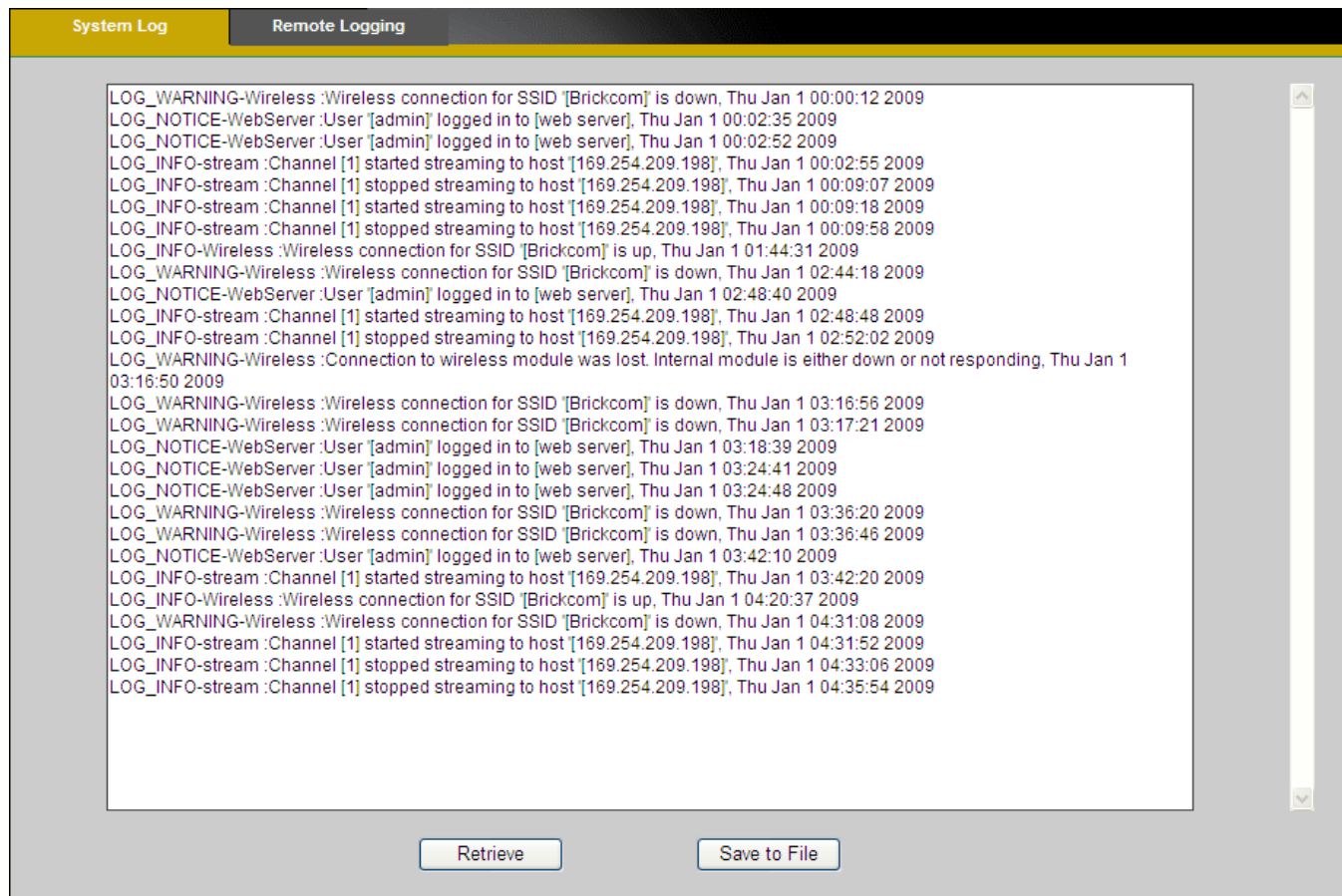
Click **Apply** to apply settings or **Cancel** to cancel changes.



System

System Log

Log – Set up the camera to record a system log when an event is triggered.



The screenshot shows a web interface for viewing system logs. At the top, there are two tabs: "System Log" (selected) and "Remote Logging". Below the tabs is a large text area containing a list of log entries in chronological order. The entries include warnings about wireless connections, notices about user logins, and info about streaming channels. At the bottom of the interface, there are two buttons: "Retrieve" and "Save to File".

System Log Remote Logging

```
LOG_WARNING-Wireless :Wireless connection for SSID '[Brickcom]' is down, Thu Jan 1 00:00:12 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Thu Jan 1 00:02:35 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Thu Jan 1 00:02:52 2009
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.209.198]', Thu Jan 1 00:02:55 2009
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.209.198]', Thu Jan 1 00:09:07 2009
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.209.198]', Thu Jan 1 00:09:18 2009
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.209.198]', Thu Jan 1 00:09:58 2009
LOG_INFO-Wireless :Wireless connection for SSID '[Brickcom]' is up, Thu Jan 1 01:44:31 2009
LOG_WARNING-Wireless :Wireless connection for SSID '[Brickcom]' is down, Thu Jan 1 02:44:18 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Thu Jan 1 02:48:40 2009
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.209.198]', Thu Jan 1 02:48:48 2009
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.209.198]', Thu Jan 1 02:52:02 2009
LOG_WARNING-Wireless :Connection to wireless module was lost. Internal module is either down or not responding, Thu Jan 1
03:16:50 2009
LOG_WARNING-Wireless :Wireless connection for SSID '[Brickcom]' is down, Thu Jan 1 03:16:56 2009
LOG_WARNING-Wireless :Wireless connection for SSID '[Brickcom]' is down, Thu Jan 1 03:17:21 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Thu Jan 1 03:18:39 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Thu Jan 1 03:24:41 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Thu Jan 1 03:24:48 2009
LOG_WARNING-Wireless :Wireless connection for SSID '[Brickcom]' is down, Thu Jan 1 03:36:20 2009
LOG_WARNING-Wireless :Wireless connection for SSID '[Brickcom]' is down, Thu Jan 1 03:36:46 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Thu Jan 1 03:42:10 2009
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.209.198]', Thu Jan 1 03:42:20 2009
LOG_INFO-Wireless :Wireless connection for SSID '[Brickcom]' is up, Thu Jan 1 04:20:37 2009
LOG_WARNING-Wireless :Wireless connection for SSID '[Brickcom]' is down, Thu Jan 1 04:31:08 2009
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.209.198]', Thu Jan 1 04:31:52 2009
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.209.198]', Thu Jan 1 04:33:06 2009
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.209.198]', Thu Jan 1 04:35:54 2009
```

Retrieve Save to File

This page displays the system's log in chronological order. The system log is stored in the camera's buffer area and will be overwritten when the buffer area is full.

Click **Retrieve** to retrieve the log or click **Save to file** to save the system log.

Remote Logging

System Log	Remote Logging
------------	----------------

Enabled	<input type="checkbox"/>
IP Address	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> Port <input type="text" value="514"/>

The user can configure the camera to send the system log file to a remote server as a log backup.

Click to enable remote log and enter the IP address of the remote server.

Enter the port number of the remote server.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Date and Time

Manual – Manually enter the date and time.

Clone from PC – The camera will sync with the time, date and time zone of the computer used to modify the camera settings. Check “Clone” to utilize this option. The read-only date and time of the PC will be displayed.

NTP – (Network Time Protocol) - NTP is a protocol for synchronizing the clocks of a computer system. Select to update the time with a NTP server on an hourly, daily, weekly, or monthly basis.

Time Zone – Select the local time zone from drop-down menu.

NTP Server 1 and Server 2 - Enter the address of the NTP server

Daylight Saving - Enable this option to automatically update for Daylight Savings Time.

Date and Time

Manual

Year

2009

Month

1

Day

1

Hour

0

Minute

0

Second

0

Clone from PC

Year

2010

Month

8

Day

3

Hour

17

Minute

27

Second

33

☐ Clone

NTP

TimeZone

(GMT+8)HONG KONG

NTP Server 1

tick.stdtime.gov.tw

NTP Server 2

clock.stdtime.gov.tw

Daylight Saving

☐ Enabled

Apply

Cancel

Click **Apply** to apply settings or **Cancel** to cancel changes.

Device Information

System Information – Displays the complete system information of the camera.

System Information	Network Settings	Video/Audio Settings
LAN MAC Address	00:40:25:00:00:01	
Firmware Version	v3.0.6.4	
Product Name	MD-100Ap	
Hardware Version	V2	
Company Name	Brickcom Corporation	
UPnP Name	MD-100Ap-0001	

Network Settings – Displays the complete network settings information of the camera.

System Information	Network Settings	Video/Audio Settings
IP Setting Type	Static	
IP Address	169.254.209.208	
Subnet Mask	255.255.0.0	
Default Gateway	169.254.209.198	
Primary DNS	0.0.0.0	
Secondary DNS	0.0.0.0	
UPnP	Enabled	
DynDNS	Disabled	
TZO	Disabled	

Video/Audio Settings – Displays the complete video/audio settings information of the camera.

System Information	Network Settings	Video/Audio Settings
Stream 1		
Video Codec	H.264	
Video Resolution	1280x800(WXGA)	
Video Frame Rate	25 fps	
Video Bitrate	1500 Kbps	
Audio Codec	N/A	
Multicast IP	N/A	
Stream 2		
Video Codec	MJPEG	
Video Resolution	1280x800(WXGA)	
Video Frame Rate	25 fps	
Video Quality	3	
Audio Codec	N/A	
Multicast IP	N/A	

Storage Management(*)

Storage Management is used to view all the recorded files on the Micro-SD/SDHC card.

The screenshot displays the 'Storage Management' interface. At the top, there are two tabs: 'Storage Management' (selected) and 'Advanced Settings'. Below the tabs, the 'Local Storage Information' section shows a table with the following data:

Local Storage Information	
Total Capacity	29.71GB
Used Space	5MB
Available Space	29.70GB

Below the table, there is a 'Memory Card Management' section with three buttons: 'Reload', 'Remove', and 'Format'. The main area of the interface displays a list of recorded files and folders. A right-click context menu is open over the file 'videoclip_ch1_20100728_045409.mp4', showing options: 'Download', 'Play', and 'Delete'. The file list includes:

- IPCAM_0001 2010/07/28 Wed 04:51:06
- snapshot_20100728_045104.jpg 2010/07/28 Wed 04:51:04
- snapshot_20100728_045106.jpg 2010/07/28 Wed 04:51:06
- videoclip_ch1_20100728_045349.mp4 2010/07/28 Wed 04:53:54
- videoclip_ch1_20100728_045357.mp4 2010/07/28 Wed 04:54:02
- videoclip_ch1_20100728_045409.mp4 2010/07/28 Wed 04:54:14
- videoclip_ch1_20100728_045409.mp4 2010/07/28 Wed 04:54:24
- videoclip_ch1_20100728_045409.mp4 2010/07/28 Wed 04:55:04
- offline 2010/07/28 Wed 05:11:24

Click **Reload** to refresh the list of recorded files.

Click **Remove** to safely remove the Micro-SD/SDHC memory card.

Click **Format** to format the Micro-SD/SDHC memory card.

Left click on the folder to list the recorded files. The user can either play the snapshot of the recorded files by moving the mouse pointer over the file or double click on a file to play it.

Right click on the folder to download, play or delete the recorded files.



NOTE – The user may need to install QuickTime multimedia framework to play the video clips.

Advanced Settings (*)

Storage Management		Advanced Settings	
Automatic Recycle			
Enabled	<input checked="" type="checkbox"/>		
Offline Record			
Enabled	<input type="checkbox"/>		
<p>If the Automatic Recycle function is disabled, there must be at least 50MB Hard Drive space available for the network camera to record video.</p> <p>If the Automatic Recycle function is enabled, it will automatically overwrite the recorded files when the available space remaining is less than 100MB.</p>			
<input type="button" value="Apply"/>		<input type="button" value="Cancel"/>	

Automatic Recycle (*) – Enable to automatically overwrite older files when the available space remaining on the Micro-SD/SDHC card is less than 100MB. If the Automatic Recycle function is disabled, there must be at least 50MB hard drive space available for the camera to be able to record video files.

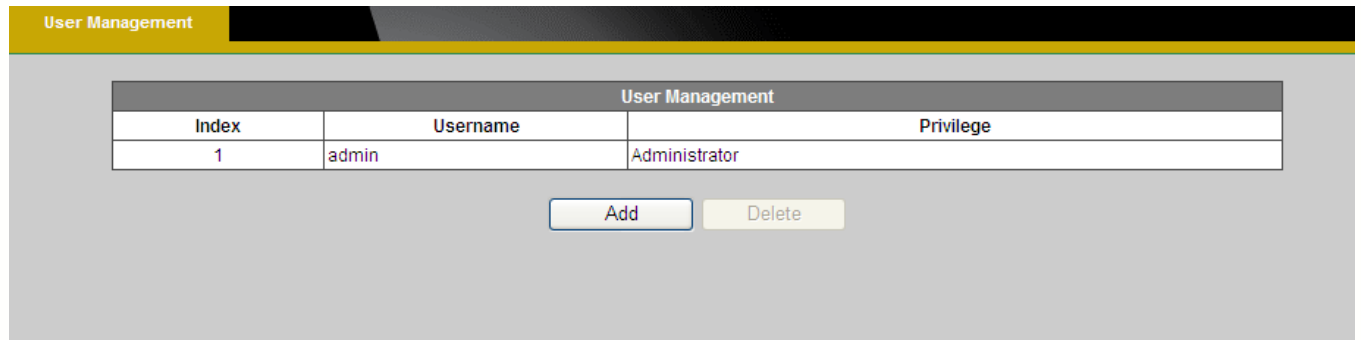
Offline Record – Enable to keep recording if the Network Camera is offline.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Maintenance

User Management

This section explains how to enable password protection and create multiple accounts.



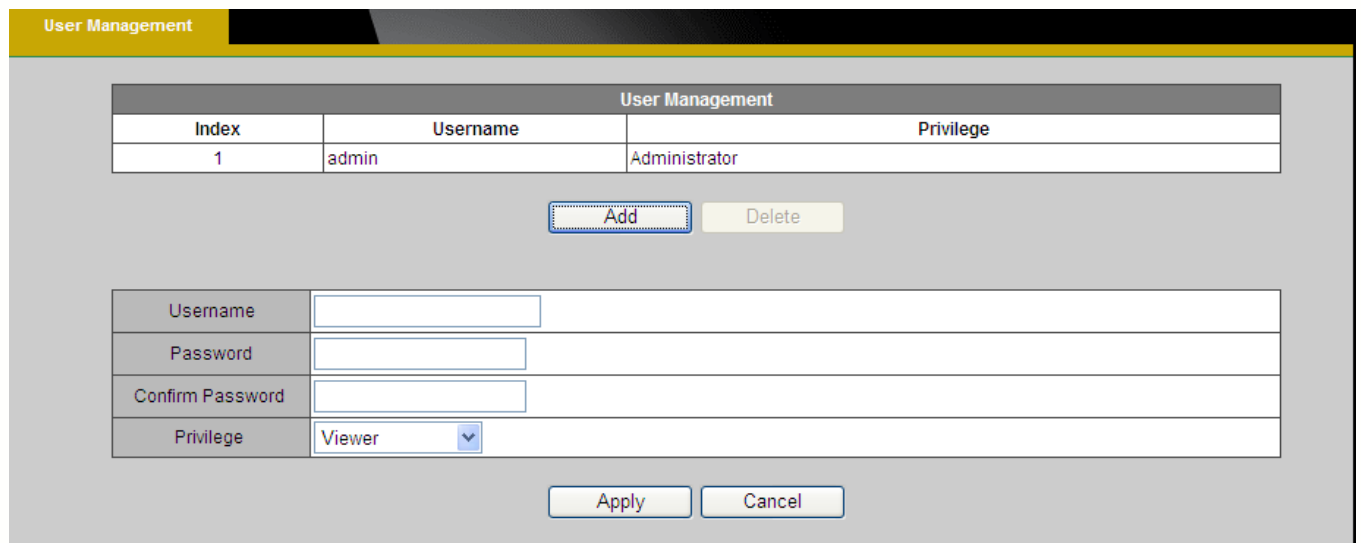
The screenshot shows the 'User Management' interface. At the top, there is a yellow header with the text 'User Management'. Below the header is a table with the following structure:

User Management		
Index	Username	Privilege
1	admin	Administrator

Below the table, there are two buttons: 'Add' and 'Delete'.

The administrator account name is “admin”, which is permanent and cannot be deleted.

Click **Add** to create an account.



The screenshot shows the 'User Management' interface with the 'Add' button highlighted. Below the table, there is a form to create a new user with the following fields:

Username	<input type="text"/>
Password	<input type="password"/>
Confirm Password	<input type="password"/>
Privilege	Viewer <input type="button" value="v"/>

Below the form, there are two buttons: 'Apply' and 'Cancel'.

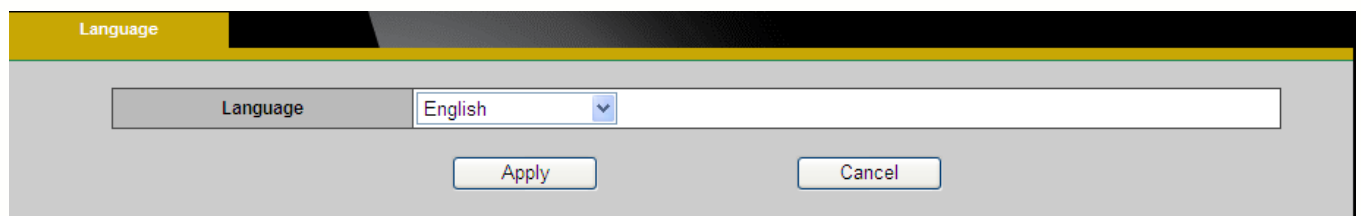
Enter the new user’s name, password and confirm password. Administrators can add up to 10 user accounts.

Select the privilege level for the new user account from the drop-down list. Privilege levels can be assigned as:

- ◆ Administrator - user has access to view and change the Configuration page. Users with administrator privilege can change other user's access rights and delete user accounts. Click **Delete** or **Update** to delete or modify a user's account.
- ◆ Viewer - user can only access the main page for live viewing.
- ◆ Remote Viewer - user can only access the main page for live viewing using TCP protocol.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Language



Select the desired language from the drop-down menu.

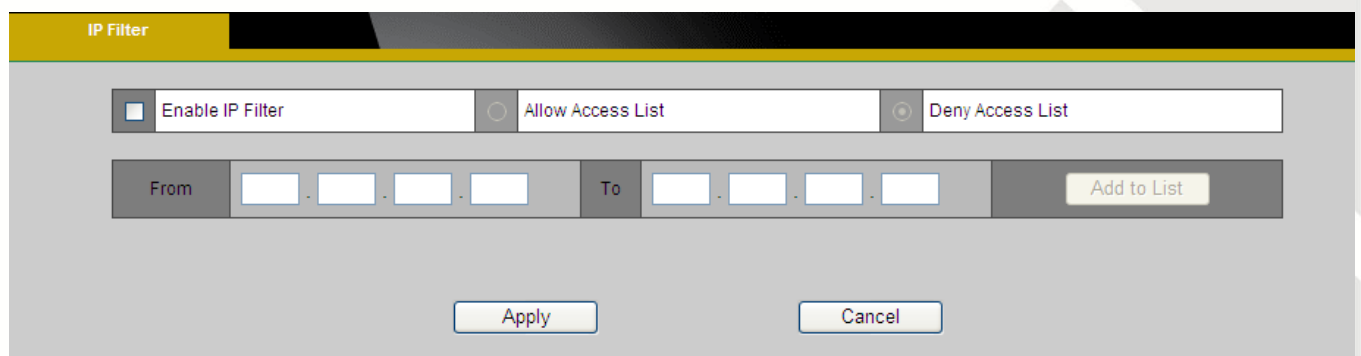
Click **Apply** to apply settings or **Cancel** to cancel changes.

IP Filter

The IP Filter is used to filter the IP addresses which are able to access the network camera.

Enable the IP Filter and select to allow or deny a range of IP addresses access to the server.

Click **Add to list** to add the IP range to the IP filter list.



Click **Apply** to apply settings or **Cancel** to cancel changes.

Firmware Upgrade

This feature allows the user to upgrade the camera firmware. It will take a few minutes to complete the process.



NOTE - Do not power off the camera or camera during the upgrade.

Upgrade - Click **Browse...** and specify the firmware file. Click **Upgrade**. The camera will begin upgrading and will reboot automatically when the upgrade is finished.

Firmware Upgrade	
Select a File	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Upgrade"/>

Configuration

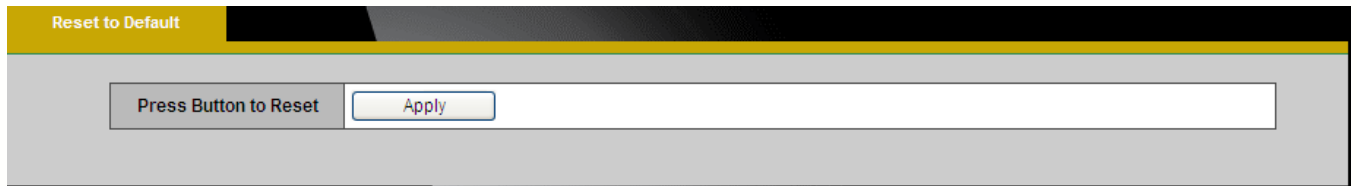
This feature allows the user to export/import the configuration files of the network camera.

Import/Export - Click **export** to pop up a dialog to indicate the location and file to export. Click **browse** to indicate the location and file of the camera configuration and click **import** to import the configuration file back into the network camera.

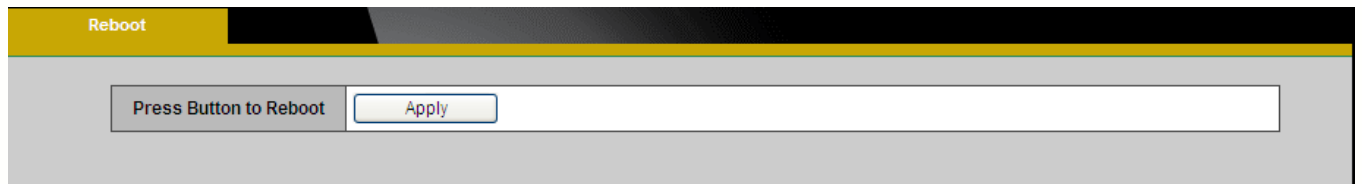
Import / Export	
Export	<input type="button" value="Export"/>
Import	Please select a file to import <input type="text"/> <input type="button" value="Browse..."/>
	<input type="button" value="Import"/>

Reset to Default

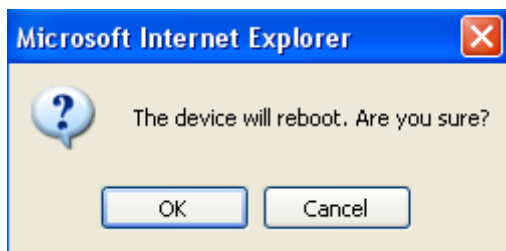
Click **Apply** to restore the network camera to factory default setting.



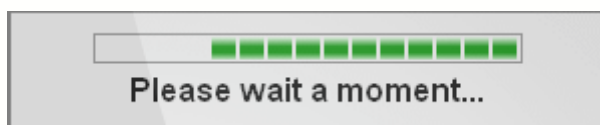
Reboot



This feature will reboot the camera. Click **Apply** to begin. A message will pop up asking “The device will reboot. Are you sure?” Click “OK” to continue. The camera will take about one minute to reboot.



The following message will show during the rebooting process.



When completed, the live video page will be displayed in the web browser.